Joint Staff
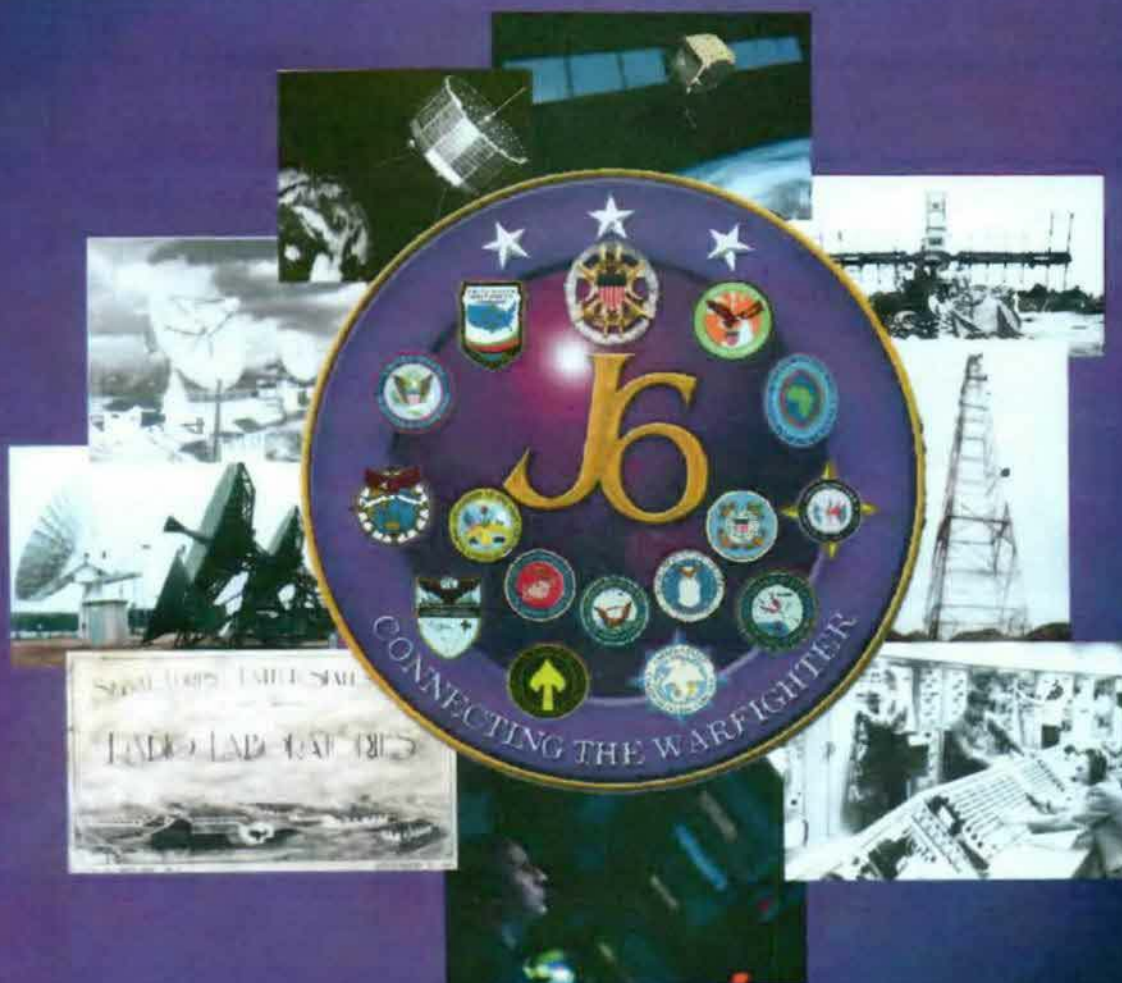# Command, Control, Communications and Computer (C4) Systems Directorate (J-6)

1949 - 2011

Connecting the Warfighter for 62 years

Table of Contents

Executive Summary

Joint Staff J-6 History

This publication is to thank the men and women who have served in J-6 and communicators improving warfighter operations worldwide.

Organization

This document is organized into an Executive Summary, an over view of the development of the Joint Chiefs of Staff (JCS) , a history of the Joint Staff J-6 and its principal J-6 Boards (Military Communications–Electronics Board (MCEB), Combined Communications- Electronics Board (CCEB) and the Functional Capabilities Boards (FCBs) and concludes with a summary of the Directors of J-6.

The Joint Chiefs of Staff

The Joint Chiefs of Staff (JCS) consist of the Chairman, the Vice Chairman, the Chief of Staff of the Army, the Chief of Naval Operations, the Chief of Staff of the Air Force, and the Commandant of the Marine Corps

The position of Chairman of the Joint Chiefs of Staff (CJCS) dates from 1949; however its antecedents trace back to World War II. The enactment of the National Security Act Amendments of 1949 created the position and General of the Army Omar N. Bradley was designated as the first Chairman.

The Joint Chiefs of Staff (JCS) consist of the Chairman, the Vice Chairman (VCJCS), the Chief of Staff of the Army, the Chief of Naval Operations, the Chief of Staff of the Air Force, and the Commandant of the Marine Corps. The collective body of the JCS is headed by the Chairman (or the Vice Chairman in the Chairman's absence), who sets the agenda and presides over JCS meetings. The Joint Staff assists the Chairman of the Joint Chiefs of Staff in accomplishing his responsibilities.

Early Communications-Electronics

The need to coordinate communications was recognized prior to the United States entering WW II.

The need to coordinate communications was recognized prior to the United States entering WW II. The Associated Communications Committee was organized in London in November 1941 and the Inter-Service Communications Board in Washington D.C. in December 1941. After the creation of the Combined Chiefs of Staff these two agencies became respectively the London Communications Committee and the Washington Communications Board, the former being responsible to the British Chiefs of Staff Committee and the latter to the Joint Chiefs of Staff.

The Joint Chiefs of Staff established the Joint Communications-Electronics Committee on 21 May 1948 by redesignation of the Joint Communications Board. The membership of the committee consisted of the Chief Signal Officer of the Army, the Chief of Naval Communications and the Director of Communications, US Air Force. The committee was made responsible for the establishment of joint military policies and plans for communications equipment, and joint communications and electronics methods and procedures.

Director Communications-Electronics

Director Communications and Electronics

On 11 August 1949: The position of Director of Communications-Electronics established.

The Joint Chiefs of Staff approved a new charter on 29 August 1951 for the Joint

Executive Summary

Communications-Electronics Committee giving the committee responsibilities in the field of electronic warfare and on 15 January 1956 a new charter was issued for the Director, Communications-Electronics. It provided that the Director would be Chairman of the Joint Communications-Electronics Committee and would be empowered to resolve splits within the committee except in matters of major policy, which would be referred to the Joint Chiefs of Staff.

On 3 April 1958, President Eisenhower announced a plan for reorganizing the Department of Defense (DOD) so as to adapt it to the conditions created by the "revolution… in the techniques of war." On 13 August 1958, the JCS approved the plan for reorganizing the Organization of the Joint Chiefs of Staff (OJCS) predominantly along conventional staff lines into nine major subdivisions. Six of them were conventionally numbered directorates: J-1 (Personnel) , J-2 (Intelligence), J-3 (Operations), J-4 (Logistics), J-5 (Plans) and J-6 (Communications-Electronics). The three unnumbered subdivisions were the Military Assistance Directorate, the Joint Programs Office, and the Joint Advanced Study Group.

Military Communications-Electronics Board

Military Communications-Electronics Board

The acting Secretary of Defense (SecDef) in October 1958 established the Military Communications-Electronics Board (MCEB). The MCEB is a senior leader communications forum that provides recommendations and advice on operational communications matters to the CJCS, VCJCS, DOD Chief Information Officer (DOD CIO) and other senior leaders and forums. The MCEB operates under the authority of DODD 5100.35 and is chaired by the Director of J-6 (today the Director J-8).

Combined Communications-Electronics Board

Combined Communications-Electronics Board

The Combined Communications-Electronics Board (CCEB) is a five-nation joint military communications-electronics (C-E) organization whose mission is the co-ordination of any military C-E matter referred to it by a member nation. The member nations are Australia, Canada, New Zealand, the United Kingdom and the United States of America (AUSCANNZUKUS).

J-6 Charter

On 14 October 1965, the J-6 charter changed to add the functions of (1) advising the Joint Chiefs of Staff on C-E matters concerning communications systems in support of the World-Wide Military Command and Control System, (2) monitor communications-electronics research and development programs of the Military Services to ensure joint compatibility in the initial development stages of new equipment and (3) Provide staff support and personnel augmentation to the operations teams of the National Military Command Center. The J-6 charter was revised again on 24 January 1967 by expanding the definition of "C-E" to include electronic counter- and counter-countermeasures, and operational aspects of manipulative deception. Again, on 27 April 1968, the J-6 charter was revised to assign to the Director for C-E the responsibility for developing plans and policies for damage assessment and residual capability assessment with respect to communications.

On 19 May 1971, primary responsibility for electronic warfare placed in J-3 and J-6 responsible for technical aspects.

On 3 May 1972 the Director, Joint Staff assigned to J-6 the additional function of serving as JCS point of contact for reporting forecasts of telecommunications requirements of the OJCS, National Military Command Authorities, and the Worldwide Military Command and Control System to the Director, Defense Communications Agency.

Executive Summary

J-6 Disestablished

On 25 February 1976, the Director, Joint Staff, acting on instructions from the Chairman, directed effective on 1 March 1976 that J-1 and J-6 were to be disestablished and their functions and personnel transferred to J-3 and J-5 .

C3S Directorate established

On 30 May 1979, the JCS established the Command, Control, and Communications Systems (C3S) Directorate. The Director C3S was charged with developing policies, plans, and programs for the JCS to insure adequate C3 support to the commanders of unified and specified commands and the National Command Authorities for joint and combined military operations.

Senior Military Communicator

In 1982 the Director C3S was established as the Senior Military Communicator.

On 16 May 1983, the Joint Chiefs of Staff established the C2 connectivity staff in the C3S Directorate, Joint Staff, with the Director, C3S, dual hatted as the Director, Command and Control Connectivity.

C3S Directorate reorganized to focus attention on the combatant commands

On 1 October 1983, the C3S Directorate was reorganized to accommodate some of the broader C3 management initiatives proposed by the JCS and approved by the Deputy Secretary of Defense in June 1983. A major JCS proposal was the consolidation of strategic connectivity functions with tactical connectivity functions and evaluation activities in the C3S Directorate. The purpose of the reorganization was to focus increased attention on C3 requirements of the unified and specified commands, achieve greater homogeneity in grouping defense-wide C3 support functions, and provide a joint communications satellite center to control satellite assets and for communications satellite planning.

C3S Directorate redesignated as the "J-6"

On 6 November 1986, the C3S Directorate was redesignated as the "J-6" Command, Control, and Communications Systems Directorate. The J-7 Directorate was created by transferring personnel from J-3, J-5 and the C3S Directorates.

National Military Strategy for Cyberspace Operations

The J-6 developed the National Military Strategy for Cyberspace Operations (NMS-CO) signed by the SecDef in December 2006. J-6 established a Cyberspace Integration Group, co-led by USSTRATCOM, to develop the NMS-CO Implementation Plan. J-6 initiated actions to establish cyberspace definitions joint doctrine, and the Joint Operational Concept for Cyberspace Operations.

In 2008, J-6 led the effort to have cyberspace declared a warfighting domain. In May of 2009 ,the Deputy Secretary of Defense published DOD's definition of cyberspace and defined cyberspace as a warfighting domain.

During April 2008 to July 2009, J6 underwent a major reorganization; MCEB and Information Integration Divisions reconfigured and combined into Net Centric Capabilities Division; the US Joint Forces Command (USJFCOM), Command and Control Functional Capabilities Board support dissolved and placed under USJFCOM Liaison Office; Portfolio Management contractors added.

SecDef announced the elimination of J-6

On 9 August 2010, the SecDef announced disestablishment of Joint Staff J-6.

On 25 Jan 2011, Resource Management Decision (RMD) 700A3 approved and J-6 funding cut.

C4 /Cyber FCB

On 4 April 2011, the C2 and Net-Centric FCB's were combined and function as the C2-NC FCB and on 29 April 2011, the C2-NC FCB was renamed the C4/ Cyber FCB. The C4 /Cyber Functional Capabilities Board supports the JROC by integrating stakeholders views into concept development, capabilities planning ,

Executive Summary

and force development with regard to C4/Cyber capabilities.

DJ8 dual-hatted as DJ6/DJ8

On 1 Apr 2011, the position of Director, J-6, was vacated. The Director J-8 was designated to serve in a supervisory role over the J-6 Directorate, until such time as the J-6 Directorate Is disestablished.

Deputy Director for Command, Control, Communications and Computer Systems (DDC4) IOC

On 1 June 2011, Deputy Director for Command, Control, Communications and Computer Systems (DDC4) was stood up under the Joint Staff J-8 by combining elements of USJFCOM J-8 and Joint Staff J-6. DDC4 is has three assistant deputy directorates - C4/Cyber FCB, Communications and Networks, and Command and Control Integration. The DDC4 has elements located at the Pentagon, Norfolk, and Suffolk VA, and Eglin Air Force Base, FL.

J-6 Disestablished

On 2 Nov 11, The Chairman approved disestablishment of Joint Staff J-6.

Directors of J-6

Sep 1949 – Aug 1951	Major General Harold M. McClelland, USAF
Sep 1951 – Jun 1953	Undetermined
Jul 1953 – Jul 1955	Major General Rex Van Den Corput, Jr., USA
Aug 1955 – Nov 1956	Major General Francis Leroy Ankenbrandt, USAF
Nov 1956 – Oct 1957	Rear Admiral Joseph N. Wenger, USN
Nov 1957 – Aug 1958	Rear Admiral William D. Irvin, USN
Aug 1958 – Jun 1961	Major General James Dreyfus, USA
Jul 1961 – Jun 1963	Brigadier General John A. McDavid, USAF
Jun 1963 – Jun 1966	Rear Admiral Theodore A. Torgerson, USN
Jun 1966 – Jun 1969	Major General Dayton W. Eddy, USA
Jul 1969 – Jul 1971	Major General Anthony T. Shtogren, USAF
Jul 1971 – Jun 1972	Rear Admiral Francis John Fitzpatrick, USN
Jun 1972 – May 1973	Rear Admiral Eugene Harrison Farrell, USN
Jun 1973 – Dec 1974	Major General Herbert Ardis Schulke Jr., USA
Jun 1975 – Feb 1976	Major General Robert E. Sadler, USAF
1976 – 1979	J-6 Disestablished functions transferred to J-3/5
Jun 1979 – Jul 1982	Lieutenant General Hillman Dickinson, USA
Oct 1982 – Jul 1984	Lieutenant General Robert T. Herres, USAF
Aug 1984 – May 1987	Lieutenant General Clarence E. McKnight, Jr., USA
May 1987 – May 1989	Vice Admiral Jerry O. Tuttle, USN
May 1989 – May 1991	Lieutenant General James S. Cassity, Jr., USAF
May 1991 – Nov 1992	Vice Admiral Richard C. Macke, USN
Dec 1992 – Jul 1994	Lieutenant General Albert J. Edmonds, USAF
Oct 1994 – Oct 1996	Vice Admiral Arthur K. Cebrowski, USN
Oct 1996 – Oct 1998	Lieutenant General Douglas D. Buchholz, USA
Nov 1998 – Oct 2000	Lieutenant General John L. Woodward, Jr., USAF
Oct 2000 – Jul 2003	Lieutenant General Joseph K. Kellogg, Jr., USA
Aug 2003 – Jul 2006	Lieutenant General Gen Robert M. Shea, USMC
Jul 2006 – Jul 2009	*Vice Admiral Nancy E. Brown, USN*
Jul 2009 – Apr 2011	Lieutenant General Dennis L. Via, USA
Apr 2011 – Nov 2011	Lieutenant General Larry O. Spencer, USAF

Directors of J-6

Joint Staff J-6 Goals and Imperatives (2010)

The Joint Staff J-6 recently published a Joint Communications Strategic Plan (2011-2015) to drive continued improvement of joint command control, communications, and computer systems for the next five years. Following the rich tradition of past J-6 Directors and Staff, this plan provides needed focus on developing C4 systems to support current contingency operations, establishes enterprise solutions to significantly improve information sharing, and lays the groundwork for future joint terrestrial, aerial, and satellite C4 connectivity. Aligning with the Chairman's priorities, J-6 established four goals to support current operations and build the future force:

Win Today's Fight

The success of current operations depends on our ability to provide timely C4 capabilities to the tactical edge. We will leverage our position as the Joint Warfighter Chief Information Office (CIO) to focus Service and Agency programs tackling these challenges and providing dedicated support to meet Combatant Commander identified requirements.

Build the Shared Environment

The future warfighter will tap into a common set of global enterprise services while enroute to, upon initial arrival, and at their contingency location, instantly pulling forward mission critical data, and injecting situational awareness information to support all friendly forces. J-6 will lead efforts to develop global enterprise services while eliminating parochial, stovepiped solutions that fail to support the joint and coalition community.

Shape the Future Force

J-6 will holistically shape future C4 forces to provide integrated, seamless, sustainable, and expeditionary capabilities for the joint and coalition warfighters. We will establish a comprehensive portfolio of C4 capabilities to support a wide range of operations. Our strategy will focus on gaps and overlaps to guide the planning, programming, and budgeting process and allow us to make tough force structure decisions.

Change C4 Culture

We have rapidly evolved from a network-enabled to a network-dependent force. As crucial to success in combat as our most sophisticated weapon systems, C4 activities must incorporate the same rules of accountability and responsibility. J-6 will drive a culture change that fosters continuous improvement in the availability, reliability, and security of information in the Cyberspace domain.

Three imperatives underpin execution of these goals: fight upon arrival, achieve a holistic C4 approach, and drive information culture change. We measure all actions by these imperatives. Can a warfighter use it when boots first hit the ground, does it share and interoperate with other systems, and does it support a secure, responsive information sharing culture?

5

The Joint Chiefs of Staff (JCS) consist of the Chairman, the Vice Chairman, the Chief of Staff of the Army, the Chief of Naval Operations, the Chief of Staff of the Air Force, and the Commandant of the Marine Corps. The collective body of the JCS is headed by the Chairman (or the Vice Chairman in the Chairman's absence), who sets the agenda and presides over JCS meetings. Responsibilities as members of the Joint Chiefs of Staff take precedence over duties as the Chiefs of Military Services. The Chairman of the Joint Chiefs of Staff is the principal military adviser to the President, Secretary of Defense, and the National Security Council (NSC), however, all JCS members are by law military advisers, and they may respond to a request or voluntarily submit, through the Chairman, advice or opinions to the President, the Secretary of Defense, or NSC.

The Joint Staff assists the Chairman of the Joint Chiefs of Staff in accomplishing his responsibilities for: the unified strategic direction of the combatant forces; their operation under unified command; and for their integration into an efficient team of land, naval, and air forces. The Joint Staff is composed of approximately equal numbers of officers from the Army, Navy and Marine Corps, and Air Force. In practice, the Marines make up about 20 percent of the number allocated to the Navy. Since its establishment in 1947, statute has prohibited the Joint Staff from operating or organizing as an overall armed forces general staff; therefore, the Joint Staff has no executive authority over combatant forces.

The position of Chairman of the Joint Chiefs of Staff dates from 1949; however its antecedents trace back to World War II. The enactment of the National Security Act Amendments of 1949 created the position and General of the Army Omar N. Bradley as designated as the first Chairman.

History

In 1903, a Joint Army and Navy Board was established by President Theodore Roosevelt,

comprising representatives from the military heads and chief planners of both the Navy's General Board and the Army's General Staff. The Joint Board acting as an "advisory committee" was created to plan joint operations and resolve problems of common rivalry between the two Services. However, as chartered, the Joint Board did not have authority to enforce its decisions or originate its own opinions and was limited to commenting on the problems submitted to it by the Secretaries of War and Navy.

After World War I, the two Secretaries agreed to revitalize the Joint Board with membership to include the Chiefs of Staff, their deputies, and the Chief of War Plans Division for the Army and Director of Plans Division for the Navy. Along with new membership, the Joint Board could initiate recommendations on its own initiative; however, they still did not possess the authority to enforce its decisions.

The Combined Chiefs of Staff (CCS) organization was established by President Franklin D. Roosevelt and Prime Minister Churchill as a result of the United States-United Kingdom Military Staff Conference, known as the ARCADIA Conference, held in Washington D.C. from December 24, 1941, to January 14, 1942. The first meeting as the CCS was held on January 23, 1942. A document describing their organization and

General Henry H. Arnold, Chief of Staff, U.S. Army Air Forces; Admiral William D. Leahy, Chairman, Joint Chiefs of Staff; Admiral Ernest J. King, Chief of Naval Operations and Commander in Chief, U.S. Fleet; and General George C. Marshall, Chief of Staff, U.S. Army

proposed duties was prepared and submitted to the President and the Prime Minister on February 10, 1942, but was not formally approved by President Roosevelt until April 21, 1942. While the United Kingdom had the Chiefs of Staff Committee, the United States had no equivalent agency with which to provide the CCS with American Services. Although a Joint Board did exist, its authority and services were of little use to the CCS. In 1947 the Joint Board was officially disbanded.

JCS meeting with the SecDef at Ramey AFB, Puerto Rico, 1956. Admiral Arthur W. Radford, USN, JCS Chairman; Charles E. Wilson, Secretary of Defense; General Maxwell W. Taylor, Army Chief of Staff; Admiral Arleigh A. Burke, Chief of Naval Operations; General Randolph McC. Pate, Marine Corps Chief of Staff; Colonel R. Phillips, Aide to Secretary Wilson and presumed the Air Force Chief of Staff.

To fill the need for a coordinated effort and to provide coordinated staff work, Admiral William D. Leahy proposed a concept of a "unified high command" in what would be called the Joint Chiefs of Staff. On 20 July 1942, Admiral Leahy became the Chief of Staff to the Commander in Chief of the Army and Navy and created a staff of the chiefs of staff of the Services to serve under him.

Admiral Leahy retained his position after the end of World War II and the JCS continued without change in the early post- war years. Meanwhile, the question of the postwar organization of the armed forces became the subject of intense and sometimes acrimonious debate. The Army sought a single department of defense with one chief of staff while the Navy wanted a loose confederation of Services. The JCS was officially established under the National Security Act of 1947 the so-called "unification" law, which represented a

compromise. In addition to creating a National Military Establishment under a Secretary of Defense who was granted limited powers, it gave legal sanction to the JCS, specified their responsibilities and established the Air Force as a separate Service. It stated the JCS consisted of a Chairman, the Chief of Staff of the Army, the Chief of Staff of the Air Force, and the Chief of Naval Operations and the Chief of Staff to the Commander in Chief "if there be one." The qualifying language reflected an understanding between the President and congressional leaders that Admiral Leahy would continue to hold the office as long as President Truman desired but that no successor would be appointed. The Commandant of the Marine Corps was to be consulted on matters concerning the Corps, but was not a regular member. The law was amended in the mid-1970's making the Commandant a full-time JCS member.

When the National Security Act entered into force on 26 July 1947, and President Truman named James V. Forrestal as the first Secretary of Defense. Forrestal expected to run a small coordinating, planning, and integrating office rather than a sizable operating one. But he soon found that repeated disagreements among the Joint Chiefs over roles and missions, allocation of funds, and basic strategy forced him to become "more of a commander than a coordinator." To deal with this situation, Secretary Forrestal in the spring of 1948 asked General Omar N. Bradley, the Army Chief of Staff, to act as his "principal military adviser" in somewhat the same capacity in which Admiral Leahy served the President. General Bradley declined. When the JCS deadlocked over allocation of funds, Secretary Forrestal had to make budget decisions himself. Accordingly, in his first annual report he recommended designating a "responsible head" for the JCS, one to whom he and the President could look for the best staff assistance on those matters for which the JCS corporately were responsible. Implementing that recommendation would require changing the National Security Act. As a temporary expedient, Secretary Forrestal asked General Dwight D. Eisenhower, recently retired as Army Chief of Staff, to serve for a short period as presiding officer of the JCS. Eisenhower agreed, and on 11 February 1949, in anticipation of Admiral Leahy's impending departure on 21 March, President Truman announced General Eisenhower's temporary appointment as both principal military adviser and consultant to himself and Secretary Forrestal and *as presiding officer of the JCS. Between February*

and June, General Eisenhower presided over twenty-four JCS meetings. Late in March, General Eisenhower became ill and there-after played a much less active role. Meanwhile, examination of a more permanent solution to management of the JCS proceeded. In February 1949 the Commission on the Organization of the Executive Branch of the Government, headed by former President Herbert Hoover, called for a JCS chairman appointed by the President, though not from among the Chiefs, to preside over JCS meetings. On 5 March 1949 President Truman called upon Congress to convert the National Military Establishment into an executive department called the Department of Defense. His proposal included granting the Secretary of Defense added authority and providing him with military and civilian staff assistance. In addition, President Truman asked for a chairman of the Joint Chiefs of Staff to take precedence over all other military officers, be the principal military adviser to the President and Secretary of Defense, and perform such other duties as the President or the Secretary might prescribe. Senator Millard E. Tydings (D, MD), Chairman of the Armed Services Committee, introduced a bill to implement the President's proposals. At the outset of the hearings on the bill, Secretary Forrestal stressed the need for someone to whom the President and the Secretary could look for "the organization and evaluation of military judgment." Since each of the Chiefs directed a particular Service, the problems that were common to all must be organized and JCS deliberations focused by an officer "who has a full-time preoccupation with that duty." Appearing as a body, the Joint Chiefs supported creating the position but asked for a prohibition against the Chairman's exercising command over either JCS members or the Services. They wanted to prevent having "a single chief of staff" and to ensure that the Services retained control of their own forces. Further, they wished it clearly stated that the Chairman would serve as the principal military adviser to the President and the Secretary in his capacity as corporate spokesman of the Joint Chiefs of Staff and not as an individual. The Senate committee revised the bill to prohibit the Chairman from exercising command over the JCS or the Services but left unchanged the provision naming him principal military adviser to the President and the Secretary. The Senate adopted this version. But, in the House, Representative Carl Vinson (D, GA), Chairman of the Armed Services Committee, was sympathetic to Navy fears of centralization and worried that something akin to a

Prussian general staff would dominate policy making. Influenced by Representative Vinson, the House proposed that the corporate Joint Chiefs, not the Chairman alone, should be military advisers

President Obama meets with the Joint Chiefs of Staff in the

to the President, the Secretary, and the National Security Council (NSC) and that the Chairman should not be a member of the JCS. Testifying on behalf of all the Chiefs, General Bradley opposed excluding the Chairman from JCS membership. A conference committee reconciled differences. To prevent the Chairman from becoming a de facto chief of staff over the Services, House conferees insisted that the JCS as a body and not the Chairman alone be the principal military advisers to the President, the Secretary, and the NSC. The final bill, which President Truman signed into law on 10 August 1949 as the National Security Act Amendments, reflected House concerns. It provided for a Chairman, who would be presiding officer of the JCS but have no vote. The corporate JCS would be the principal military advisers to the President, the Secretary, and the NSC, with the Chairman to inform the Secretary of Defense and the President when appropriate of issues about which the Chiefs could not agree. As presiding officer, the Chairman would provide the agenda for JCS meetings and assist the Joint Chiefs "to prosecute their business as promptly as practicable." The Chairman's term was set at two years, with an additional two-year appointment possible; in time of war, however, there would be no limit upon the number of reappointments. Over the years, the prohibition against the Chairman's voting proved to have little meaning. In practice, Chairmen gave Secretaries their own opinions whenever the Joint Chiefs had diverging or "split" views. Of far greater consequence for the Chairman's role and impact was the fact that the JCS as a body, rather than the Chairman, were to function as the principal military advisers.

On 11 August 1949 President Truman nominated General Bradley as Chairman. Senate confirmation followed quickly, and General Bradley was sworn in as the first Chairman on 16 August 1949.

The Department of Defense Reorganization Act of 1958 stemmed from a widespread belief in the 1950's that the Defense Department needed major revision to provide for more effective, efficient, and economical administration, to eliminate duplication, and to encourage more comprehensive policies and programs. The intelligence system was not "in consonance with the objectives of the 1958 Act" which specified strengthening the channels of command from the President to the "combatant forces." Thus, the 1958 Act resolved several asymmetries concerning the "vague authority" of the Secretary of Defense. The Act removed all doubts about the Secretary's authority and placed the JCS in the chain of command, particularly in terms of responsibility for intelligence support to the Unified and Specified Commands. Subsequently DoD Directive 5100.1 (31 December 1958) was published assigning functional responsibility to the JCS and Military Departments for the provision of adequate, timely and reliable intelligence. Overall, the Act extended the centralization processes underway in DOD since 1947.

In November 1959, seven directorates (J-1 through J-6, plus a directorate for military assistance) were established within the JCS. The Joint Staff expanded from 210 to 400 officer billets for the seven directorates as one of the provisos of the 1958 Defense Reorganization Act.

In 1986 the Goldwater-Nichols Department of Defense Reorganization Act implemented some of the suggestions of the Packard Commission commissioned by President Ronald Reagan in 1985. Led by Senator Barry Goldwater (R-Arizona) and Representative William "Bill" Nichols (D-Alabama), the bill was signed into law by President Reagan on October 1, 1986. The Goldwater-Nichols Act designated the Chairman as the principal military adviser to the President, National Security Council and Secretary of Defense centralizing the military advice in the Chairman as opposed to the Service Chiefs. The act also established the position of Vice Chairman of the Joint Chiefs of Staff, simplified the chain of command and changed the personnel management of military officers with respect to joint education and joint duty assignments.

JCS ORGANIZATION
1 NOVEMBER 1942
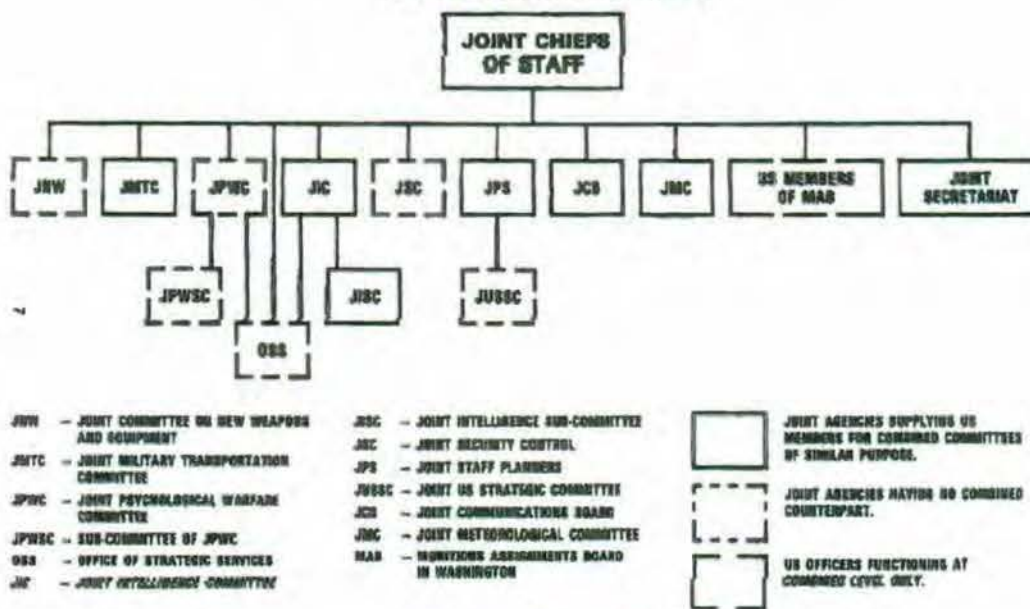
NOTE: ONLY MAJOR ORGANIZATIONAL ENTITIES SHOWN.

Chairmen of the Joint Chiefs of Staff

1949–1953	General of the Army Omar N. Bradley
1953–1957	Admiral Arthur W. Radford, USN
1957–1960	General Nathan F. Twining, USAF
1960–1962	General Lyman L. Lemnitzer, USA
1962–1964	General Maxwell D. Taylor, USA
1964–1970	General Earle G. Wheeler, USA
1970–1974	Admiral Thomas H. Moorer, USN
1974–1978	General George S. Brown, USAF
1978–1982	General David C. Jones, USAF
1982–1985	General John W. Vessey, Jr., USA
1985–1989	Admiral William J. Crowe, USN
1989–1993	General Colin L. Powell, USA
1993–1997	General John M. Shalikashvili, USA
1997–2001	General Henry H. Shelton, USA
2001–2005	General Richard B. Myers, USAF
2005–2007	General Peter Pace, USMC
2007–2011	Admiral Michael G. Mullen, USN
2011–	General Martin E. Dempsey, USA

On 20 July, 1942 Fleet Admiral William Daniel Leahy was appointed as the Chief of Staff to the Commander in Chief of the Army and Navy (President Franklin D. Roosevelt) and served in that position throughout World War II, and continued under President Harry S. Truman). Fleet Admiral Leahy was the first US military officer ever to hold a five-star rank in the US Armed Forces.

Evolution of the Joint Staff

LEGISLATION OR DIRECTIVE	CHANGE
1947 National Security Act	• Designated Secretary of National Defense to exercise general authority, direction, and control • Created the National Military Establishment (NME) • Established US Air Force • Established CIA and NSC • Established JCS as permanent agency • JCS became principal military advisers to President and Secretary of Defense • Established a legal basis for unified and specified commands • Limited size of Joint Staff to 100 officers • Organized Joint Staff into Strategic Plans, Intelligence, Logistic Plans (Joint Secretariat was not part of the Joint Staff)
1948 Key West Agreement	• Confirmed JCS members' function as executive agents for unified commands • Service roles defined
1949 Amendment	• Military department heads lost cabinet rank and were removed from NSC • Renamed NME the Department of Defense • Created office of Chairman
11 Aug 1949	Position of Director of Communications-Electronics established.
1952 Amendment	• Gave Commandant of the Marine Corps (CMC) co-equal status on JCS on Marine Corps issues
1953 Amendment	• Removed JCS from executive agent status, i.e., handling day-to-day communications and supervision over unified commands • Established military departments as executive agents for unified commands • Assigned responsibility for managing Joint Staff to Chairman
1957 Amendment	• Reorganized Joint Staff into Strategic Plans, Intelligence, Logistic Plans, Communications-Electronics, Subsidiary Activities, and Military Assistance Affairs
1958 Amendment	• Gave Chairman a vote • Removed military department as executive agent • Joint Staff has no executive authority, but assists the Secretary of Defense in exercising direction over unified commands • Limited Joint Staff to 400 officers • Reorganized Joint Staff to take planning and operational responsibilities; divided staff into Personnel, Intelligence, Operations, Logistics, Plans and Policy, Communications-Electronics • Chairman selects Director, Joint Staff, in consultation with JCS • Chairman manages Joint Staff on behalf of JCS

Evolution of the Joint Staff

LEGISLATION OR DIRECTIVE	CHANGE
1963	• Formalized position of Operations Deputies • Established position of Director, Joint Staff • Established NMCC outside Joint Staff • Disestablished Intelligence Directorate; transferred responsibilities to DIA
1964	• Established Administrative Services Directorate • Term OJCS came into use to include Joint Staff and all agencies under the Joint Chiefs of Staff
1976 Internal Reorganization	• Disestablished J-1 and J-6, incorporating functions into J-5 and J-3
1978 Amendment	• Made CMC a full member of JCS
1979 Internal Reorganization	• Established Command, Control, and Communications Systems Directorate (J-6)
1981 Internal Reorganization	• Reestablished J-1 as Manpower and Personnel Directorate
1984 DOD Authorization Act	• Established Strategic Plans and Resource Analysis Agency (SPRAA)
1986 Amendment	• Designated Chairman principal military adviser • Transferred duties of corporate JCS to Chairman • Specified chain of command to run from President to Secretary of Defense to unified and specified combatant commanders • Created position of Vice Chairman • Resulted in the creation of J-7 and J-8 directorates • Limited Joint Staff to 1,627 military and civilian personnel
1991 Auth Act	• Numerical limit on Joint Staff repealed
1993 Auth Act	• Vice Chairman became full member of JCS
2011 Memo	• J-6 Disestablished

Joint connotes activities, operations, organizations, etc., in which elements of two or more Military Departments participate. "The Coast Guard as established January 28, 1915 shall be a military service and a branch of the armed forces of the United States at all times. The Coast Guard shall be a service in the Department of Homeland Security, except when operating as a service in the Navy" - *USCODE Title 14, Chapter 1, Part 1.* The Coast Guard Commandant is not a member of the Joint Chiefs of Staff. The Commandant reports to the President, the Secretary of Homeland Security, and the Secretary of Defense.

The Joint Chiefs of Staff Identification Badge

Until 1963 the Joint Chiefs of Staff had no unique seal, emblem, or other identification device. From March 1949, personnel serving on a full-time duty status in the Organization of the Joint Chiefs of Staff (OJCS) and associated boards and staffs were authorized to wear the National Military Establishment Identification Badge (subsequently renamed the Department of Defense Identification Badge). Military personnel assigned to the OJCS wore the DOD Identification Badge until January 1961, when Secretary of Defense Thomas S. Gates suspended further issuance of the badge. On 5 February 1962, Lieutenant General Earle G. Wheeler, who was just completing his tour of duty as Director of the Joint Staff, wrote to the Assistant Secretary of Defense for Manpower on the matter of the identification badge. General Wheeler favored reinstitution of the badge or a similar device for military personnel on the Joint Staff. In December 1962 when Deputy Secretary of Defense Roswell Gilpatrick reinstated the DOD Identification Badge as the Office of the Secretary of Defense Identification Badge but limited its issuance to individuals assigned to OSD, he informed the Director of the Joint Staff that he did not object to institution of a similar device for Joint Staff personnel.

After the Personnel Directorate of the Joint Staff recommended adoption of a JCS identification badge, the US Army Institute of Heraldry designed an appropriate device. On 2 April 1963 the Joint Chiefs of Staff approved the establishment of the Joint Chiefs of Staff Identification Badge and on 3 April issued JCS Memorandum of Policy (MOP) 142 authorizing award of the badge to members of the Armed Forces assigned to the OJCS. Subsequently, the criteria were expanded to include military personnel assigned to agencies in direct support of the OJCS and later the Joint Staff. Over the years, the JCS Identification Badge has been used as the seal of the Joint Chiefs of Staff although no official action has ever designated it as such. The design features, within an oval silver metal wreath of laurel two and one-half inches in height and two inches in width overall, the shield of the United States. The chief (the upper one-third of the shield) in blue enamel and the base (the lower two-thirds of the shield) of thirteen stripes in alternating white and red enamel are superimposed on four gold metal unsheathed swords, two in pale (vertical) and two in saltire (crossed). The points and pommels of the swords are resting on the wreath; the blades and grips are entwined with a gold metal continuous scroll surrounding the shield with the word "Joint" at the top and the words "Chiefs of Staff" at the bottom, all in blue enamel letters. The symbolism of the badge includes the laurel for achievement, courage, and victory and the four unsheathed swords for the armed might of the Army, Navy, Air Force, and Marine Corps and their combined constant vigilance and readiness in the defense of the United States. Patented on 1 December 1964 (Patent No. Des. 199,678), the JCS Identification Badge appears on the covers of all JCS publications, plans, and official files.

Mission: The Director C4 Systems (DJ6) and Joint Community Warfighter (JCW) Chief Information Officer (CIO) provides advice and recommendations on Information Technology (IT) and national security systems (NSS) matters to the Chairman of the Joint Chiefs of Staff; leads the joint communications community; shapes and implements joint policy; develops joint IT, NSS, and Net-Centric doctrine and plans; monitors joint communications system programs; ensures communications, IT, and NSS support to the President and Secretary of Defense, combatant commanders, and joint forces for joint and combined/multinational military operations; evaluates the communications, IT, and NSS support for the National Military Command System (NMCS); conceptualizes future IT architectures and supports efforts to define, revise, or extend architectures; provides direction and supports the Joint Capabilities Integration and Development System (JCIDS) as the lead advocate for Net-Centric capabilities.

Background and Early History:

1941: The need to coordinate communications was recognized prior to the United States entering WW II. The Associated Communications Committee was organized in London in November 1941 and the Inter-Service Communications Board in Washington D.C. in December 1941. After the creation of the Combined Chiefs of Staff these two agencies became respectively the London Communications Committee and the Washington Communications Board, the former being

Single sideband 40-kw transmitter for one teletype circuit - Pentagon August 1946

responsible to the British Chiefs of Staff Committee and the latter to the Joint Chiefs of Staff.

July 1942: The Washington Board was reconstituted as the Combined Communications Board supporting the combined Chiefs of Staff on communication matters, and was responsible for coordinating methods, procedures, operations, equipment and all communication matters of combined application.

The Combined Communications Board was recognized as the only combined communications body of the Combined Chiefs of Staff.

The Joint Communications Committee was established by the War and Navy Departments in April 1942 and was the supporting agency of the joint US Chiefs of Staff on communications matters, and is responsible for coordinating methods, procedures, operations, equipment and all communication matters of joint US application. When the Washington Communications Board was reconstituted as the Combined Communications Board by the Combined Chiefs of Staff in July 1942, the Joint Chiefs of Staff reconstituted and took over the Joint Communications Committee which then became the Joint Communications Board. The Board was composed of two Army and two Navy officers on part-time duty. They were, however, assisted by a large number of part- and full-time agencies organized into groups, committees, and subcommittees on various aspects of communications problems.

At the end of World War II, the JCS received staff support from a complex array of part-time and permanent committees and working groups. This structure had evolved to meet wartime needs, including the necessity for sitting with British officers on combined (US-UK) bodies. At the top level, the JCS staff organization consisted of 14 inter-Service committees that were for the most part, similar in composition and operating procedures to the Joint Chiefs of Staff themselves. These supporting bodies consisted, with only three exceptions, of Army and Navy officers serving on the various committees on a part-time basis as an additional duty to regular assignments in the War and Navy Departments because they served as representatives of their Services rather than as Joint Staff officers, their decisions had to be unanimous. These senior-level committees, in all but four instances, were supported by working subcommittees. These were of two types: six full-time staff agencies whose members functioned as Joint Staff officers and not as

representatives of their Services; and four sets of part-time subcommittees organized and functioning in the same manner as the senior committees they supported. The Joint Chiefs of Staff had no director or chief of staff to direct the efforts of this multitude of supporting agencies. The only coordination of their efforts was performed by the Joint Secretariat, which was a full-time JCS agency. In addition, the Joint Deputy Chiefs of Staff relieved their superiors of a great burden of routine business.

The Joint Communications Board was the JCS agency overseeing communications matters. It made recommendations to the Joint Chiefs of Staff on the subject, coordinated methods, procedures, operations, and equipment among the Services, and served as the US component of the Combined Communications Board. The Joint Communications Board consisted of four members: the Chief Signal Officer, US Army; the Communications Officer, US Army Air Forces; the Director, Naval Communications; and the Communications Officer, Headquarters, Commander in Chief, US Fleet. The board was authorized to implement its own decisions except in matters of major policy. To assist · it in carrying out its functions, the board established a number of specialized technical committees and subcommittees made up of officers

World War II - Joint Assault Signal Company (JASCO)

The Joint Chiefs of Staff reviewed the after action reports about landings and operations on Tarawa and Guadalcanal that recommended that communications for air liaison, naval fire control, and shore parties be pooled into one organization. A new communications unit was therefore created in late 1943; it was called the Joint Assault Signal Company (JASCO). The JASCO was formed by adding the shore fire control and air liaison parties – which were too small to be independent units – to the signal companies (special) which had been handling communications for shore battalions since the summer of 1942. Most of the signal companies (special) were changed over to the new organization on short notice. The JASCO did not operate as one unit during amphibious operations. When an assault was mounted, the various JASCO teams would be attached to the appropriate units needing support. Air liaison teams would be attached to battalion and regimental headquarters, and to division headquarters. Naval shore fire control teams would be attached to each battalion landing team. Communications teams, made up of Signal Corpsmen, would be assigned to each shore battalion to provide radio and wire links both laterally and vertically.

WW II Radio Operator and assistant with field generator

assignments in the War and Navy departments.

17 July 1947: The Joint Chiefs of Staff approved a modification in the charter of the Joint Communications Board which enabled it to implement its own decisions unless they concerned matters of major policy requiring approval of the Joint Chiefs of Staff.

21 May 1948: The Joint Chiefs of Staff established the Joint Communications-Electronics Committee by redesignation of the Joint Communications Board. The membership of the committee consisted of the Chief Signal Officer of the Army, the Chief of Naval Communications and the Director of Communications, US Air Force. The committee was made responsible for the establishment of joint military policies and plans for communications equipment, and joint communications and electronics methods and procedures. The committee was also to make recommendations to the Joint Chiefs of Staff on allocation of responsibilities to the Services for installing joint systems, equipments and facilities, and on the allocation of civilian facilities required by the armed services. It was to recommend to "appropriate agencies" on research and development needs. In addition, the committee was to plan for and allocate the following: Service responsibilities for

serving part-time as an additional duty to regular

JCS ORGANIZATION
28 AUGUST 1949
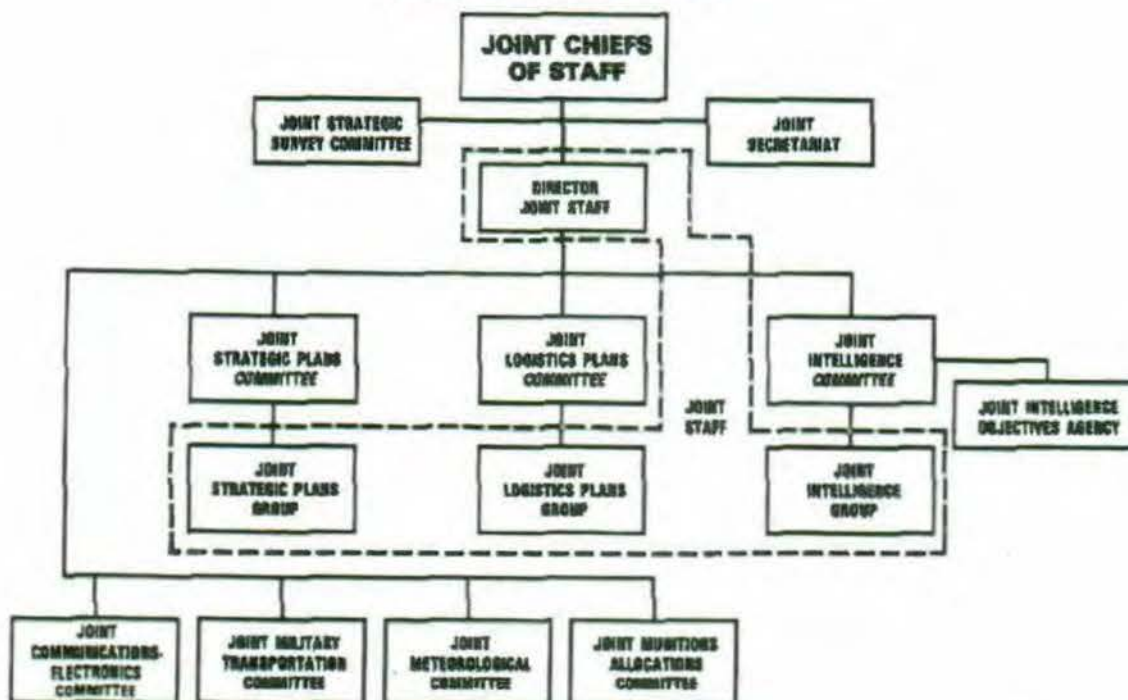
NOTE: ONLY MAJOR ORGANIZATIONAL ENTITIES SHOWN.

Installing and operating systems, equipments, and facilities and emission frequencies for all military equipment. And finally, the committee was to have cognizance over prevention of electro-magnetic interference with all military systems and equipments. Committee procedures included a provision for the senior member to preside over meetings. Splits were to be reported to the Director, Joint Staff for submission to the Joint Chiefs of Staff. The committee had the power to implement its decisions, except those of a major character requiring the approval by the Joint Chiefs of Staff. This charter was prepared in response to a request by the Joint Staff Ad Hoc Organization Committee dated, 30 October 1947. As a result of the adoption of this charter, all committees and subcommittees of the Joint Communications Board were made panels and subpanels of the Joint Communications-Electronics Committee.

11 August 1949: The position of Director of Communications-Electronics established.

2 May 1951: The Joint Chiefs of Staff advised the Secretary of Defense that the duties' of the Joint

Communications-Electronics Committee should be expanded to include necessary responsibility to deal with a potential Soviet electronic attack on US radio transmissions. They made these recommendations as a substitute for a CIA proposal for a new centralized authority to discharge this responsibility on the ground that electronic warfare was primarily a military responsibility.

29 August 1951: The Joint Chiefs of Staff approved a new charter for the Joint Communications-Electronics Committee, revised by the addition of the following in compliance with their decision of May 2, 1951 giving the committee responsibilities in the field of electronic warfare: Develop and coordinate principles, plans and procedures in the field of Electronic Warfare, and maintain effective liaison with the other agencies having responsibilities in that field, as required to insure:

1. That the electronic countermeasures of the United States and her allies shall be of maximum effectiveness.

2. That the electronic countermeasures of hostile nations shall not be effective.

B-29 —Radioman's Position
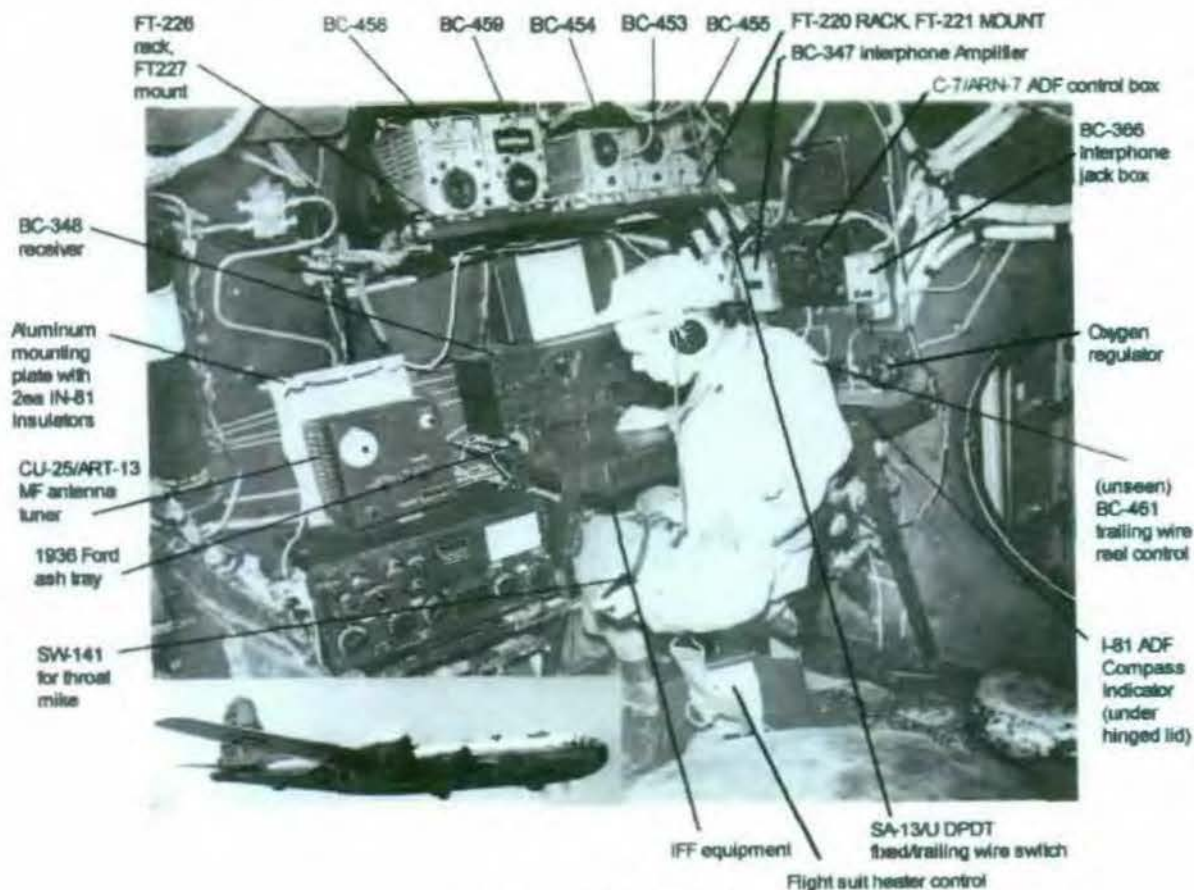
Army Signal Corps Lineman— Korea

3. That all Electronic Warfare measures shall be effectively coordinated.

4. That the US representatives on military communications-electronics agencies of the North Atlantic Treaty Organization and of other international organizations shall receive adequate guidance in the field of Electronic Warfare.

15 January 1956: A new charter was issued for the Director, Communications-Electronics. It provided that the Director would be Chairman of the Joint Communications-Electronics Committee and would be empowered to resolve splits within the committee except in matters of major policy, which would be referred to the Joint Chiefs of Staff. He was to perform the following functions:

1. Exercise general guidance over administration and utilization of communications-electronics activities of the Services.

2. Keep the Joint Chiefs of Staff advised of the implementation of approved plans, doctrines and Department of Defense policies relating to the communications-electronics activities of the Services.

3. Maintain full collaboration and coordination

between the Joint Communications-Electronics Committee and the Appropriate Assistant Secretary of Defense, the Services and the Director, National Security Agency.

4. Review all Service communications projects involving strategic concepts or of joint interest; recommend to the Assistant Secretary of Defense (Supply and Logistics) on the justification of all projects estimated to cost more than $500,000.

5. Conduct studies as requested by the Joint Chiefs of Staff or that might be required to coordinate Service communications facilities.

14 February 1956: The Joint Chiefs of Staff agreed to recommendations of the Joint Intelligence and Communications-Electronics Committees that responsibilities of the Armed Forces Security Agency Council still remaining with the Joint Chiefs of Staff should be reassigned as follows:

1. Communications intelligence to the Joint Intelligence Committee in collaboration with the Joint Communications-Electronics Committee;

2. Communications security to the Joint Communications-Electronics Committee with collaboration of the Joint Intelligence Committee;

3. Communications portions of cover and deception matters to the Communications-Electronics Committee in collaboration with the Joint Strategic Plans Committee.

Camp Evans, New Jersey, 1959. These antennas tracked the earliest US and Soviet satellites.

26 April 1957: The Chairman, Joint Chiefs of Staff approved a charter for the Joint Communications-Electronics Group. It provided a membership consisting

of the Deputy Director for Communications-Electronics, who was a Flag or General Officer with electronics experience and additional members specified by the Director, Joint Staff in approximately equal numbers from the Services. The normal tour of duty was two years. The group was to be organized into teams by the Deputy Director. The functions of the group included the following:

1. Give advice and prepare studies on communications electronics for the Joint Chiefs of Staff;

2. Review communications-electronics aspects of plans prepared by unified commanders; and

3. Give staff support to other agencies of the Joint Chiefs of Staff and the Office of the Secretary of Defense.

17 June 1957: The Chairman, Joint Chiefs of Staff approved a new "Functions of the Director, Joint Staff," revised to bring it into conformity with recent changes in the JCS subordinate structure made by the Chairman on February 19, 1957. The changes were as follows:

1. The Permanent Logistics Reviewing Committee was added to the list of JCS organizations reporting directly to the Joint Chiefs of Staff.

2. The newly designated Deputy Directors for Subsidiary Activities, Military Assistance Affairs and Communications-Electronics were now directed to preside at the corresponding committee meetings regardless of seniority, as was already the case for the Deputy Directors for Plans, Intelligence, and Logistics.

22 July 1957: The Chairman, Joint Chiefs of Staff approved a charter for the Joint Communications-Electronics Committee, which had been revised to take account of the establishment of the Joint Communications-Electronics Group and the redesignation of the Director, Communications-Electronics as the Deputy Director for Communications-Electronics.

3 April 1958: President Eisenhower announced a plan for reorganizing DOD so as to adapt it to the conditions created by the "revolution… in the techniques of war."

7 June 1958: In compliance with the President's wishes stated on April 3, 1958, the Chairman, Joint Chiefs of Staff, redesignated several committees and abolished several part-time JCS committees including the Joint Communications-Electronics Committee.

13 August 1958: The Joint Chiefs of Staff approved the

Early US Army Satellites

plan for reorganizing the Organization of the Joint Chiefs of Staff so as to conform to the requirements imposed by the President in his message of April 3, 1958 to the Congress. The plan provided a Joint Staff organized predominantly along conventional staff lines into nine major subdivisions. Six of them were conventionally numbered directorates, as follows: J-1 (Personnel) Directorate J-2 (Intelligence) Directorate J-3 (Operations) Directorate J-4 (Logistics) Directorate J-5 (Plans) Directorate J-6 (Communications-Electronics) Directorate. The three unnumbered subdivisions were the Military Assistance Directorate, the Joint Programs Office, and the Joint Advanced Study Group.

October 1958: Acting Secretary of Defense establishes the Military Communications-Electronics Board (MCEB).

1 January 1959: Charters were circulated for the new component agencies of the Joint Staff (J-1, J-2, J-3, J-4, J-5, J-6, and Joint Military Assistance Affairs Directorate). The J-6 (Communications-Electronics Directorate) charter established the organization of J-6 to include the Director for Communications-Electronics, a Deputy Director, an Executive Officer, and Electronics Systems, Communications Systems, Security and Electronic Warfare, and Plans and Policies Divisions. The Director and Deputy Director were Flag or General Officers from different military departments serving two-year terms. The positions were rotated among the military departments. Each military department was given approximately equal representation by rank and importance of billet throughout the entire directorate. The charter assigned the Director for Communications-Electronics two missions: assisting the Joint Chiefs of Staff in communications planning in support of strategic and operational concepts; and exercising staff supervision and control for the Joint Chiefs of Staff of

Vietnam era AN/GRC-106 HF-single sideband (SSB) radio

communications-electronics operations in support of unified and specified commands. To accomplish these missions, the Director for Communications-Electronics was assigned the following functions:

1. Prepare joint communications-electronics studies, plans and policies, including electronic warfare, communications intelligence and security, and special warfare.

2. Review communications-electronics plans of unified and specified commands.

3. Monitor implementation of approved joint plans and policies related to communications-electronics activities of the military departments and unified and specified commands.

4. Recommend communications-electronics support needed by the Joint Chiefs of Staff and Secretary of Defense to exercise command.

5. Review communications-electronics requirements to support joint strategic and operational concepts.

6. Recommend assignment to military departments of responsibility for installing communications-electronics systems.

7. Monitor provision of communications-electronics to support by the military departments.

8. Coordinate point-to-point voice, teletype, facsimile, and data transmission facilities of the military departments.

9. Recommend allocation of civilian communications facilities to meet civilian requirements.

10. Recommend emergency allocation of existing major communications-electronics equipment.

11. Plan and coordinate policy development for frequency spectrum utilization.

12. Monitor joint aspects of military frequencies allocation.

13. Establish joint and combined communications-electronics procedures and instructions.

14. Develop principles for joint and combined compatibility of systems and equipment.

15. Serve as Chairman, Military Communications-Electronics Board.

1962: Director Defense Communications Agency (DCA) Designated as Chairman of the Military Communications-Electronics Board (DCA & NSA added)

October 1962: National Military Command Center established.

21 December 1962: General Maxwell D. Taylor, who had succeeded General Lemnitzer as Chairman, Joint Chiefs of Staff on 1 October 1962, directed the Director, Joint Staff to evaluate his predecessor's reorganization proposal, with particular attention to the following: the steps that could be taken under present personnel ceilings, thereby avoiding the necessity for new legislation; the pros and cons of continuing J-2 and J-6 as well as the Defense Intelligence and Communications Agencies; and the relationship between the Joint Strategic Survey Council and the Special Studies Group.

16 October 1962: WWMCCS, was created by DOD Directive S-5100.30, titled "Concept of Operations of the Worldwide Military Command and Control System," which set the overall policies for the integration of the various command and control elements that were rapidly coming into being in the early 1960s. An assistant secretary of defense for Telecommunications was established.

7 March 1963: The Joint Staff identified and analyzed seven principle issues, one of which was "is there a need for a J-6 as well as a Director, Defense Communications Agency." To retain the J-6 would continue JCS representation on the Defense Communications-Electronics Board and preserve a staff

USS *Arlington*, a major communications relay ship, originally commissioned in July 1946 as the small aircraft carrier *Saipan* (CVL-48). Provided communications support during the Southeast Asian conflict and visited ports from Japan to Australia. Assisted in the Apollo 8, 10 and 11 space flight recovery efforts.

agency giving direct communications-electronics support to the Joint Chiefs of Staff. However, it would also continued divided responsibilities in these fields. Alternate courses of action were to continue J-6 in its present form, to transfer some of its functions to the Defense Communications Agency, to discontinue J-6 and either assign all its functions to the Defense Communications Agency, or assign only some of them and divide the remainder among other Joint Staff directorates.

15 March 63: The Joint Chiefs of Staff made the following decisions on their Chairman's proposals of 7 March:

1. Disestablish J-2 and rely henceforth on the Director, Defense Intelligence Agency for all intelligence support.

2. Retain the following in their present form:

   a. J-6;

   b. Joint Strategic Survey Council;

   c. Special Assistant for Counter insurgency and Special Activities;

   d. Special Assistant for Military Assistance Affairs;

   e. Special Assistant for Arms Control;

   f. The billets of the Directors of J-3, and J-5 as two star billets.

16 July 1963: A new J-6 charter extended the tours of the Director and Deputy Director for Communications-Electronics from two to three years and added the following functions:

1. Exercise staff supervision for the Joint Chiefs of Staff over the Defense Communications Agency.

2. Carry out, with a representative of Defense Research and Engineering, the DOD Electromagnetic Compatibility Program.

3. Make recommendations on international standardization programs and requirements for international and joint call signs, address groups, and routing indicators.

4. Recommend on communications security and electronic warfare assistance to foreign governments.

5. Recommend on communications-electronics requirements for the Military Assistance Program.

23

6.   Participate in the Joint Battle Staff.

7.   Serve as a member of the DOD Advisory Committee on Federal Aviation.

14 October 1965: The J-6 charter was changed by adding the following functions:

1.   Advise the Joint Chiefs of Staff on communications-electronics matters concerning communications systems in support of the World-Wide Military Command and Control System.

2.   Monitor communications-electronics research and development programs of the Military Services to ensure joint compatibility in the initial development stages of new equipment.

3.   Provide staff support and personnel augmentation to the operations teams of NMCC, ANMCC, NEACP, and NECPA.

24 January 1967: The J-6 charter was revised by expanding the definition of "communications-electronics" to include electronic counter-and counter-countermeasures, and operational aspects of manipulative deception.

27 April 1968: The J-6 charter was revised to show assignment to the Director for Communications-Electronics of responsibility for developing plans and policies for damage assessment and residual capability assessment with respect to communications. This change was made in order to assign staff supervision within the Joint Staff over damage-assessment responsibilities assigned to the unified and specified commanders, the Services, and the Defense agencies.

VERDIN Automated Submarine Broadcast System - 1970's

19 May 1971: The Joint Chiefs of Staff, in recognition of combat experience in Southeast Asia showing that electronic warfare was an operational as well as a communications-electronics function, directed changes in Joint Staff responsibilities so as to place primary responsibility for it in J-3. J-6 would henceforth be responsible only for technical aspects of electronic warfare.

9 November 1971: A new J-6 charter was circulated which assigned the following additional functions to the Director for Communications-Electronics:

1.   Advise the Joint Chiefs of Staff on tactical command and control communications and the application of automatic data processing to communications operations.

2.   Initiate action to implement JCS plans, policies, and decisions.

3.   Allocate, deploy, and control the use of mobile communications systems assigned to the Joint Chiefs of Staff.

4.   Evaluate plans for protecting communications electronics equipment from nuclear effects.

5.   Serve as JCS focal point for developing policies, positions, and guidance concerning surveillance systems.

6.   Provide centralized direction for the Minimum Essential Emergency Communications Network.

7.   Validate communications security research and development requirements; validate requirements for secure communications between US and foreign military forces.

3 May 1972: The Director, Joint Staff assigned to J-6 the additional function of serving as JCS point of contact for reporting forecasts of telecommunications requirements of the OJCS, National Military Command Authorities, and the Worldwide Military Command and Control System to the Director, Defense Communications Agency.

4 June 1975: The Director, DCS issues a memorandum titled "MILSATCOM user requirements Data Base," which requests the establishment of a single military satellite communications (MILSATCOM) user requirements database/document for the Department of Defense.

6 January 1976: The Secretary of Defense approved a reduction in the office of the Joint Chiefs of Staff of 366 personnel spaces (277 military and 89 civilian), to be accomplished by the end of FY 1977.

9 January 1976: The Joint Chiefs of Staff approve, for planning, sizing, and system design of future MILSATCOM systems, the MILSATCOM user

requirements data base (now known as the SATCOM Database or SDB).

9 February 1976: The Chairman, Joint Chiefs of Staff asked the other JCS members their views on an OJCS reorganization plan that had been developed by the Director, Joint Staff to accomplish the personnel cut directed by the Secretary of Defense. The Director planned to make the necessary reduction in five steps, beginning 1 March 1976. The initial two steps would see a merger of selected functions of J-1 into J-5, J-6 into J-3, and the consolidation of all regional functions under J-5. The result would be a 7 percent reduction totaling 110 spaces. The remaining three steps would see the elimination of the Studies Analysis and Gaming Agency (SAGA), realignment of J-4, and a drawdown of spaces across the Joint Staff. A total of 366 spaces of which five would be flag/general officer billets would be eliminated by executing all five steps. The Chairman, Joint Chiefs of Staff stated that the space allocations contained in this plan were tentative and subject to change pending further definition of requirements. He recommended that the Joint Chiefs of Staff approach this reorganization prudently; it was his intention to execute Steps 1 and 2 while holding Steps 3, 4, and 5 in abeyance pending future OSD reorganization/reduction actions.

25 February 1976: The Director, Joint Staff, acting on instructions from the Chairman, Joint Chiefs of Staff, directed the implementation of Steps 1 and 2 of the OJCS reorganization plan. In Step 1, to be effective on 1 March 1976: J-1 and J-6 were to be disestablished and their functions and personnel transferred to J-3 and J-5 (J-1 POW, inspections and data services and J-6 to J-3; remainder of J-1 to J-5); the Joint Secretariat was to reduce the 86 spaces by merging the Control and Implementation Division into the Action Management Division and transferring the Declassification Branch from the Historical to the Documents Division; the Directorate of Administrative Services was to be reduced to 257 spaces by merging the Support and the Graphic Arts, Printing and Distribution Divisions and transfer ring the Financial Management Branch to the Personnel Division; and the Deputy Director, Joint Staff was to be eliminated. The personnel reductions associated with these changes were to be completed by December, 31 1976. Step 2, to be effective on April 1, 1976, would see the consolidation of regional functions of J-3 and J-5 in J-5, the establishment of a Current Operations Division in J-3, and the transfer of Environmental Services functions and personnel from J-3 to J-5. (The transfer of the Environmental Services function was not carried out. It remained in J-3.)

26 February 1976: The Chief of Staff, US Army informed the Chairman, Joint Chiefs of Staff that he

JCS ORGANIZATION
31 DECEMBER 1979

25
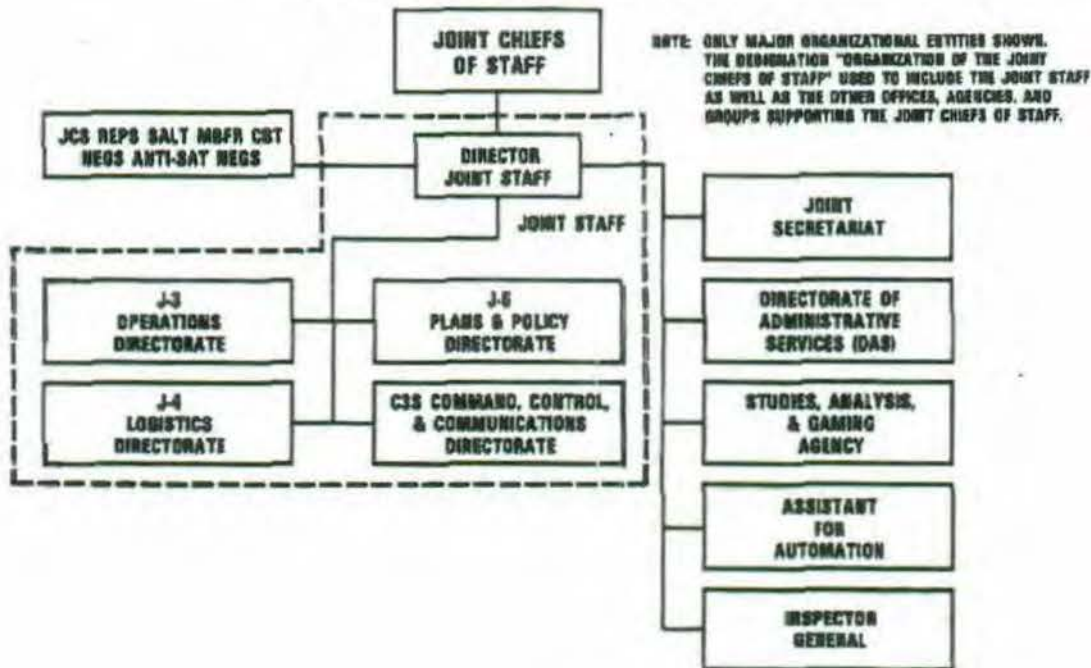
supported the basic concept of the Chairman's reorganization plan of February 9, 1976. But the Army Chief of Staff advised caution in disestablishing J-6 pending clarification of the transfer of J-6 functions.

27 February 1976: The Commandant of the Marine Corps, responding to the Chairman, Joint Chiefs of Staff's request of February 9, 1976, said he supported the proposal to reorganize the Joint Staff into three directorates. He suggested that, in as much as this constituted a shift from conventional general staff organization, the use of general staff designations (J-l, etc) might also be discontinued so as to avoid confusion when dealing with subordinate headquarters which were organized along conventional general staff lines.

2 April 1976: The Joint Chiefs of Staff informed the Secretary of Defense that, because of recent manpower reductions and the resulting reorganization, certain C-E functions formerly discharged by J-6 could no longer be performed by the JCS organization. They therefore asked the Secretary to approve transfer of the following and functions to the Manager, National Communications System: development and coordination of plans and procedures at national level for assessing damage to communications resources; maintenance of a reporting system to keep track of all communications resources, cat civilian as well as military, needed to support the military establishment; and preparation of recommended policies and procedures for allocating civilian communications facilities, when necessary, to the Department of Defense. The Joint Chiefs of Staff also informed the Secretary that they were reassigning the following functions to new agencies responsible to them:

1. To the Chief of Staff, US Air Force, as executive agent for the Joint Chiefs of Staff, keep information on DOD support of NASA and serve as DOD point of contact in such matters.

2. To the Chairman, US Military Communications-Electronics Board:

    a. As designee of the Chairman, Joint Chiefs of Staff, acting with the designee of OSD: provide policy and direction guidance to the Electromagnetic Compatibility Analysis Center.

    b. As executive agent for the Joint Chiefs of Staff. manage the Frequency Resource Record System.

3. To the Director, Defense Communications Agency: review and approve, in conjunction with the Services, requests for communication services and assets; revise and publish periodically a review of area communications-electronics capabilities; publish a register of

communications-electronics agreements.

4. To the Director, Defense Nuclear Agency: evaluate, in conjunction with the Director, Defense Communications Agency, plans for protecting communications-electronics equipment from nuclear effects.

5. To USCINCEUR: provide the US Member on the NATO Allied Communications Security Agency.

1 June 1976: The Chairman, US Military Communications-Electronics Board assumed responsibility for the new functions assigned to him by the Joint Chiefs of Staff on April 2, 1976.

18 June 1976: The Director, J-3, in referring to JCSM-123-76, informed USCINCEUR that he was being assigned responsibility for providing the US representative to the Allied Communications Security Agency (ACSA), effective on June 30, 1976. Manning to support the function would be provided from existing USEUCOM assets.

30 June 1976: USCINCEUR assumed the communications duties transferred to him from J-6 by the Joint Chiefs of Staff on April 2, 1976.

19 July 1976: The Deputy Secretary of Defense advised the Chairman, Joint Chiefs of Staff that he had approved, with certain modifications, the reorganization proposals submitted by the Joint Chiefs of Staff on 2 April 1976.

Airman operating a tactical satellite radio

Advanced Extremely High Frequency Satellite

23 March 1978: MJCS 83-78, 23 March 1978 authorized the Joint Command, Control, and Communications Staff and Operations Course (JC4ISOC).

30 May 1979: The Joint Chiefs of Staff established the Command, Control, and Communications Systems (C3S) Directorate in the Joint Staff. The Director for Command, Control, and Communications Systems, under the authority and direction of the Chairman and the Joint Chiefs of Staff and subject to the supervision and guidance of the Director, Joint Staff, was charged with:

1. Developing policies, plans, and programs for the Joint Chiefs of Staff to insure adequate C3 support to the commanders of unified and specified commands and the National Command Authorities for joint and combined military operations;

2. Conceptualizing future C3 systems design, and;

3. Providing direction to improve command and control. Two deputy directors were authorized, one for strategic C3 systems, and the other for tactical and theater C3 systems, together with an executive officer, and subordinate divisions and offices. In a resulting realignment of missions and functions, the WWMCCS ADP Project Management Office structure was disestablished and its responsibilities divided. The C3S Directorate would deal primarily with policy, requirements, and project direction and control; the DCA would concentrate on implementing decisions affecting WWMCCS ADP reached through the joint process as directed by the Joint Chiefs of Staff.

The action establishing the C3S Directorate stemmed from a finding by the Defense Science Board in July 1978 that a central organization was needed to oversee

design and testing of all command and control systems that cut across Service lines. Initially, the Defense Communications Agency prepared a plan to that end that required expansion of DCA by more than 300 personnel. The Joint Chiefs of Staff objected and proposed instead to the Secretary of Defense on 3 April 1979 that they have responsibility for establishing command and control system interoperability and interface criteria in coordination with the commanders of the unified and specified commands, to include all command and control systems involving more than one Service and ongoing activities with NATO and other allies. Thereafter, the CJCS developed a plan for the C3S Directorate, which the Secretary of Defense and the Joint Chiefs of Staff approved on 17 April 1979.

1980: Command and Control Initiative Program (C2IP) Founded by JS/J-6 as way to fund the combatant commands for emergent or unexpected needs which are not part of normal POM cycle or PB.

1982: Director C3S established as the Senior Military Communicator.

3 March 1982: A revised charter for the Joint Materiel Priorities and Allocations Board (JMPAB), superseding the charter of 20 March 1979, was circulated. The revision added the Director, C3S, as a member of the board and deleted the provision for an "annual" review of the Master Urgency List, substituting "as requested by the Under Secretary of Defense (Research and Engineering)." The revised charter also added a representative of the C3S Directorate to the JMPAB secretariat.

16 May 1983: The Joint Chiefs of Staff established the C2 connectivity staff in the C3S Directorate, Joint Staff, with the Director, C3S, dual hatted as the Director, Command and Control Connectivity. The Director, Command and Control Connectivity, was to form a C2 connectivity staff from the elements and responsibilities of the Joint Strategic Connectivity Staff established by the Joint Chiefs of Staff under CINCSAC at Offutt Air Force Base, Nebraska, in 1980. The Joint Chiefs of Staff approved the revision of the terms of reference of the Joint Strategic Connectivity Staff and assigned it and its resources to the Director, C3S. This interim step was taken in connection with JCS recommendations to the Secretary of Defense, made in Feb 1983, for consolidating C3 management responsibilities. (The Joint Strategic Connectivity Staff was disestablished in the reorganization of the C3S Directorate on Oct 1, 1983.)

1 October 1983: The Command, Control, and Communications Systems (C3S) Directorate was

Communications Satellites

3 November 1983: On the Deputy Secretary of Defense approved the charter of the JCS-proposed C3 Review Council, whose mission was to support the C3 Executive Committee. Established in 1982, the C3 Executive Committee was comprised of the Deputy Secretary of Defense, the Chairman of the Joint Chiefs of Staff, and the Under Secretary of Defense (Research and Engineering) as secretary.

8 November 1983: J-6 sponsors the C3 Curriculum at the Naval Post Graduate School—MJCS 77-83, 8 November 1983, "Management of Joint Command, Control, and Communications Education and Training Programs."

1985: Chairmanship of the MCEB transferred from Director DCA to Director C3S .

1985: J-6 Published the Global C3 Assessment.

6 November 1986: The Command, Control, and Communications Systems (C3S) Directorate was redesignated as the "J-6" Command, Control, and Communications Systems (C3S) Directorate. The J-7 Directorate was created by transferring personnel from J-3, J-5 and the C3S Directorate. In addition the C3S Directorate transferred personnel to the J-1 Directorate.

1989: The C2 Initiative Program (C2IP) became JS-Level Program per CJCSI 7401.02A, with an average budget of $9M - $10M per year.

8 January 1990: J-6 established and published the first charter for the Centralized Direction, Management, Operation and Technical support of the Nuclear Command Control and Computer (NC3) System (MCJCS-003-90) and established the Director, DISA as the NC3 System engineer. This charter defined the NC3 responsibilities for the CJCS, Joint Staff, DISA, Combatant Commands, Services, NSA, DIA, and DNA. Subsequent updates to the charter were published as CJCSI 5119.01.

1 Feb 1991: The C3S Directorate renamed the Command, Control, Communications and Computer (C4) Systems Directorate, J-6.

3 June 1992: Published JCS Pub 6-0. *Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations.*

27 July 1992: J-6 established and published (MCM-103-92) the first CJCS Nuclear Command and Control System Technical Performance Criteria. This document commonly referred to as the NTPC established the required performance levels for NC3 systems. Subsequent updates were published as CJCSI 6811.01.

reorganized to accommodate some of the broader C3 management initiatives proposed by the Joint Chiefs of Staff and approved by the Deputy Secretary of Defense in June 1983. A major JCS proposal had been the consolidation of strategic connectivity functions with tactical connectivity functions and evaluation activities in the C3S Directorate. The purpose of the reorganization was to focus increased attention on C3 requirements of the unified and specified commands, achieve greater homogeneity in grouping Defense-wide C3 support functions, and provide a joint communications satellite center to control satellite assets and for communications satellite planning. The reorganization, approved by the Chairman of the Joint Chiefs of Staff on November 9, 1983, provided three deputy directors reporting to the Director, C3S. In the completed reorganization the Deputy Director for Unified and Specified Command C3 Support supervised five divisions—USEUCOM/NATO; USPACOM; USREDCOM, USSOUTHCOM, USCENTCOM, MAC; NORAD, SAC, USLANTCOM/ SPACE; and Command and Control C2 Automatic Data Processing. The Deputy Director for Defense-wide C3 Support supervised five divisions—Satellite Communication; Terrestrial and Switched Systems; Joint Tactical C3 Systems; National Military Command Center; and Contingency Support. The Deputy Director for C3 Connectivity and Evaluation, whose directorate was part of the OJCS but outside the Joint Staff, supervised three divisions—Analysis; Systems; and Operations. The elements of the Joint Strategic Connectivity Staff, which was disestablished, were incorporated into the directorate. Three offices reported to the Director, C3S: the Planning, Programming, and Budgeting Office; the Special Actions Office; and the Joint Requirements future C3 systems designs, and provide direction to improve command and control.

"When the soldier hits push-to-talk I want him to be able to bring the full power of the entire U.S. Military to bear at the point of need...the network makes that possible...that's what's keeping folks alive."

LTG Austin
Director, Joint Staff

2 September 1992: J-6 established and published MCM-127-92 the first CJCS Prioritization of C3 nodes and systems requiring protection from High Altitude Electromagnetic Pulse (HEMP) events. Subsequent updates were published as CJCSI 3222.01.

31 May 1993: J-6 published (MCM-72-93) the first comprehensive listing of critical Nuclear Command and Control Equipment and Facilities. Subsequent updates were published as CJCSI 6810.01.

12 June 1993: J-6 published "C4I for the Warrior." The C4I for the Warrior concept was the vision and a roadmap for providing information support to the joint warfighter. It set forth unifying principles and a roadmap for achieving global C4I joint interoperability. Each Service had its own supporting strategy for achieving global, joint C4I interoperability - Navy/Marine Corps - Copernicus - Army - Enterprise - Air Force – Horizon.

10 January 1994: J-6 expanded the scope of CJCSI 6811.01 to include tactical nuclear weapon Command and Control. This for the first time established the required performance levels for tactical NC3.

12 Jun 1994: J-6 developed "C4I for the Warrior - Global Command & Control System"

June 1994: The Joint Warrior Interoperability Demonstration (JWID) was created from the Army's Secure Tactical Data Network (STDN) series under the C4I for the Warrior concept. Using the Defense Information Systems Agency (DISA) as the Executive Agent, the Joint Staff directed DISA, in concert with a lead Service, to organize network experiments to bring emerging public sector and other government agency technologies into DOD projects and into the warfighters' sphere of recognition, while improving joint C4 interoperability.

1995:

- Developed the Joint Decision Support System (JDSS) an automation tool for the combatant commands to assess C4 systems.

- Represented the Joint Staff on the Congressionally mandated Commission on Roles and Missions (CORM). as a member of the C2 information Technology issue team.

- Institutionalized Information Warfare in the PPBS process. The result of this effort established IW as a warfare are that must be considered, included and integrated with all other warfare areas.

- Initiated project Gabriel as part of the J-6 Advanced Concepts Program to establish a Joint C4ISR Battle Center to accomplish larger scale integration to realize the VCJCS vision for a system of systems for the warfighter.

- Completed the Advanced Battlespace Information System (ABIS) Task Force report to define concepts, needs, and technology implications of Vision 2010.

- Redefined C4 system survivability by funding threat weapon research at Los Alamos National Laboratory.

- Sponsored the creation of a Joint Spectrum Center

- Cosponsored with ASD(C3I a Nuclear C3I Review stemming from the 1994 Nuclear Posture Review.

- Mission Needs Statements (MNS) and Operation Requirements Documents (ORDS):
  ◊ DISN MNS
  ◊ GBS MNS

- ◊ MILSATCOM MNS
- ◊ Combat Survivor Evader Locater (CSEL) MNS
- ◊ Milstar Polar Adjunct ORD
- ◊ Defense IEMATS Replacement Command and Control Terminal DIRECT ORD.

February 1995: Completed the second command and control (C2) Joint Warfighting capabilities Assessments (JWCA). Issues included, DISN, DMS, Milstar & Milstar terminals, Polar Adjunct, GCCS. The next JWCA in August covered Mobile Satellite Services, JCSE and UAV payloads.

February 1995: Completed Sensor-to-Shooter ISR Interoperability Analysis. Expanded findings of sensor-to-shooter to include a C4ISR Architecture. To provide targeting support for three precision weapons (JDAM, JSOW, ATACMS)

14 April 1995: J-6 published the Joint C4 Systems Descriptions Document Volume I and Volume II are companion documents to the Joint Global C4 Assessment (GC4A) published by the Joint Staff J-6.

30 May 1995: J-6 revised JP 6-0 "Joint Doctrine for Command, Control, Communications, and Computer-(C4) Systems Support to Joint Operations."

September 1995: The Military Communications-Electronics Board (MCEB) and the Joint Chiefs of Staff (JCS) directed the Joint Spectrum Center (JSC) to conduct an analysis to identify DOD's current and future spectrum requirements. This multi-year study was accomplished in two phases: (1) DOD use in "exclusive Federal" spectrum between 100 MHz and 6 GHz and (2) DOD use of shared Federal and non-Federal spectrum between 100 MHz and 6 GHz. The results were contained in two reports published respectively in

January 1997 and September 1998.

1996: J-6 Contributed to Joint Vision 2010, an operational framework designed to further increase the effectiveness of joint operations and to guide the evolution of the Armed Forces into the 21st Century. The key to Joint Vision 2010, as described by Secretary of Defense Cohen, "is an integrated *system of systems* that will give them superior battlespace awareness, permitting them to dramatically reduce the fog of war."

30 August 1996: The Director, Defense Information Systems Agency, officially deactivated the World Wide Military Command and Control System (WWMCCS) Intercomputer Network (WIN). Concurrently, the Joint Staff declared the Global Command and Control System (GCCS) as the joint command and control system of record.

1997: The J-6 in coordination with the J3, determined that the Defense Messaging System (DMS) would not meet the performance required for NC3 and established an IPT that eventually fielded what is known as the EAM hybrid solution to meet NC3 performance criteria.

December 1997: DepSecDef "charged" the Joint Staff to conduct an assessment of DOD Spectrum Management. This included: (1) a study on major spectrum reallocation and management issues expected over the next two years, recommending procedures to identify, analyze, and respond to potential infringement on DOD spectrum allocations; and (2) submit a proposal to realign duties and responsibilities in the spectrum management area performed throughout the Department and identify reallocation of missions and resources. Concurrent with this tasking, DepSecDef directed the immediate transfer of the Joint Spectrum Center from Air Force (as Executive Agent) to DISA.

Joint Chiefs of Staff — June 2002

30
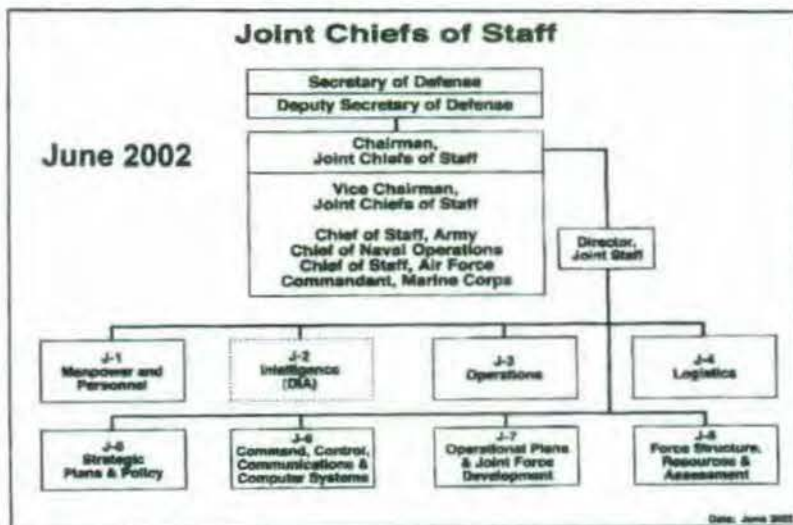
Global Information Grid

The study identified nine critical issues for DOD to address within the following two years; provided three proposals to ensure effective DOD spectrum management; and recommended a second look within two years.

1998: MCEB Charter Revised Reducing Chartered Members to 10.

1998: Five officers from the J-6 Command Center division were transferred to the J-3 National Military Command Center (NMCC) and the division disbanded.

September 1998: J-6 developed CJCSI 6260.01 Joint Warrior Interoperability Demonstration.

1999: Joint Staff J-6 established a Year 2000 (Y2K) working group and published the "Y2K Handbook." DOD installations around the world fixed more than 2,300 mission critical systems. The Y2K system failures were minor.

September 1999: Command Center (J6C) dissolved and some positions moved to J3. Policy and Doctrine Division created out of the Information Superiority Division (J6Q)

December 1999: JS/J-6 Space Division publishes first Global Positioning System (GPS) Selective Availability Anti-Spoofing Module Requirements document (CJCSI 6140.01) mandating the Services to move to the new GPS security architecture.

2000: The functions of the J-6 developed Joint C4I Battle Center were transferred to USJFCOM.

May 2000: J-6 Published "Enabling the Joint Vision" which described how the GIG will support the Chairman's Joint Vision 2010.

8 May 2000: J-6 developed CJCSI 6212.01B established policies and procedures for interoperability certification. The instruction identified Interoperability requirements for mission need statements (MNSs), Capstone Requirements Documents (CRDs), and operational requirements documents (ORDs) and established the Interoperability Key Performance Parameter (I-KPP).

June 2000: J-6 Collaborated on Joint Vision 2020 which builds upon and extends the conceptual template established by *Joint Vision 2010* to guide the continuing transformation of America's Armed Forces. JV 2020 supported the development of a concept labeled the global information grid to provide the network-centric environment required to achieve the goal of JV2020.

9 June 2000: J-6 expanded the scope of CJCSI 6811.01 and established the radiation hardening protection levels required for satellites supporting NC3.

August 2000: J-6 Published "C4 Systems Descriptions" *J-6 Notice 6111.01A.*

5 February 2001: J-6 developed the Communications and Computing Systems Architecture as part of Global Information Grid v1.0, dated April 2001.

March 2001: J-6 Published the "Contract with the Warfighter – Improving C4 For the JTF", and published the "C4 Readiness Assessment" (*J-6 Notice 6111.02*)

2 May 2001: GIG Definition signed by Vice Director J-6, Principal Deputy Under Secretary Of Defense for Acquisition, Technology, And Logistics (PDUSD(AT&L)) and Principal Assistant Secretary of Defense(C3I)/CIO, The GIG is defined as: "The globally interconnected, end-to-end set of information capabilities, associated processes and personnel for collecting, processing, storing, disseminating and managing information on demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services

Joint Staff J-6 Personnel 2003

and other associated services necessary to achieve Information Superiority. It also includes National Security Systems as defined in section 5142 of the Clinger-Cohen Act of 1996. The GIG supports all Department of Defense, National Security, and related Intelligence Community missions and functions (strategic, operational, tactical and business), in war and in peace. The GIG provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms and deployed sites). The GIG provides interfaces to coalition, allied, and non-DOD users and systems."

27 July 2001: J-6 Contributed to "Net Centric Warfare DOD Report to Congress."

September 2001: Under Deputy Director O-6 dissolved. Director's Action Group created. Number of contractors increased.

October 2001: DepSecDef requested Chairman, JCS to lead a study of the options and preferred course of action regarding (1) assessment of selected spectrum management responsibilities and resources that might transfer from the MILDEP Spectrum Management Offices (SMOs) to a joint spectrum management organization and (2) assessment, including benefits and drawbacks, of establishing a new Defense Agency or DOD Field Activity whose Director reports to the SecDef through ASD(NII). The report concluded that the MILDEP SMOs retain all current functions except development of national and international spectrum policy positions which would transfer to the Defense Spectrum Office (now the Defense Spectrum Organization).

13 January 2002: J-6 developed the Global Information Grid (GIG) Application level Systems Architecture v1.0 to serve as an example of how mission area stakeholders can describe and assess Service unique and joint systems/applications interoperability and integration requirements.

J-6 Challenge Coin

2003: The responsibilities for Information operations and supporting billets were transferred from J-6 Directors Action Group to J-3 and USJFCOM.

February 2003: J-6 Spectrum Division participated in an ASD(NII) directed IPT) to conduct an assessment report that details the cost, operational, programmatic, and other impacts of relocating DOD operations from 1710-1755 MHz , including and the 1416 "protected sites", from the 1710-1755 MHz band per DOD's agreement as part of the Third Generation (3G) viability assessment conducted with the National Telecommunications and Information Administration and the Federal Communications Commission.

April 2003: J-6 delivered JPEN (Joint Protection Enterprise Network), an integrated Force Protection information sharing system initiative to support the Global War on Terrorism. A J-6 team designed, developed and fielded JPEN within 90-days, a process normally taking years to complete. JPEN provides situational awareness to the military, law enforcement and intelligence communities and was deployed to over 6000 locations within the United States. After development, the oversight of JPEN was transferred to US Northern Command (USNORTHCOM) to support its mission for Homeland Defense and Civil Support.

27 May 2003: MCEB Deputies Panel organized to vet issues for the C4 Principals.

13 June 2003: The DJ-6 designated the Joint Community Chief Information Officer.

September 2003: Three divisions combined into other existing Divisions: Knowledge MGT and *Message Applications Division (J6D)*; Network MGT Division (J6N); and Policy And Doctrine Division (J6Q). NSA Representative moving to J6K (Information Assurance Division)

20 November 2003: Replaced the Interoperability Key Performance Parameter with the Net-Ready Key Performance Parameter (NR-KPP) in CJCSI 6212.01C to assess information needs, information timeliness, information assurance, joint interoperability and supportability, and net-ready attributes required for both the technical exchange of information and the end-to-end operational effectiveness of that exchange.

March 2004: The GIG Enterprise Services Initial Capabilities Document (ICD), approved by the JROC on 22 March 2004, describes "core" enterprise services available to all users and COI services available within a *COI*.

June 2002: J-6 Spectrum Division participated in an ASD(NII) directed Integrated Project Team (IPT) to identify, analyze, and coordinate cost, operational, and acquisition impacts related to the Congressionally directed reallocation of 27 MHz (i.e., the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz bands) transferred from Government to non-Government use pursuant to the provisions of the Omnibus Budget Reconciliation Act of 1993 (OBRA-93). This effort was to be used as a template for future DOD reallocation analyses.

June 2004: The Joint Warrior Interoperability Demonstration changed its name to the Coalition Warrior Interoperability Demonstration (CWID). The shift from "Joint" to "Coalition" describes the larger community of participants, including national and international government agencies.

September 2004: The Joint Community Warfighter (JCW) Chief Information Officer (CIO) (Director, Joint Staff/J-6) published the first "Joint C4 Campaign Plan" to better integrate and synchronize joint C4 efforts and staff actions.

September 2004 to March 2005: Divisions combined with existing divisions: Interoperability Division (J6I) and Integration and Information Division (J6K); Global C2 Applications Division (J6V) and C4 Systems Support Division (J6C); and a section of DAG went to J3 Creation of JFCOM C2 FCB. Addition of CTO. Integration and Information and Assurance Division split into Information Integration and Assured Information Sharing Division

2005: The Joint Requirements Oversight Council (JROC) approved two critical C4 concept documents: the Net-Centric Environment Joint Functional Concept (NCE JFC), and the Net-Centric Operational Environment Joint Integrating Concept (NCOE JIC). The transformational vision of NCO required a move from *stove-piped* and *interoperable* systems to interdependent systems. To achieve this end, the team focused on numerous information integration efforts. An example is the partnership with the Office of the Secretary of Defense's Director of Operational Test and Evaluation, DISA's Joint Interoperability Test Command, and US Joint Forces Command (JFCOM) to establish a joint network-centric test environment.

2005: J-6 Chairs the Net-Centric Functional Capability

Board. The NC FCB is responsible for the organization, analysis, and prioritization of joint warfighting capability needs within the assigned joint network-centric operations functional area. The NC FCB has four primary responsibilities:

1. Oversee a portfolio of network centric capabilities within JCIDS; the acquisition process, and the PPBE process.

2. Lead development of network centric-related concepts, operational views of integrated architectures, and related studies. NC FCB will use these products as the framework for network-centric capability analyses in support of JCIDS.

3. Ensure horizontal integration of network centric capabilities across the other FCB functional areas.

4. Ensure vertical and horizontal integration of communications capabilities across national, strategic, operational, and tactical levels.

March 2005: J-6 Delivered the Deployable Joint Command and Control (DJC2) Concept of Operations.

May 2005: DJ6 and ASD(NII) jointly signed "Broad NII-J -6 Network-Centric Concerns ."

July 2005; J-6 declared Spectrum XXI (a desktop spectrum management tool suite) to be the Joint Standard Frequency Assignment System. Spectrum XXI remains in use today both within the DOD, in NATO and through Foreign Military Sales in many foreign nations as the basic spectrum management tool.

September 2005: DJ6 initiated the C4 Principals Offsite. A meeting with the ASD(NII) and principal communicators of the Services, NSA, DIA, and DISA (Now chaired by ASD(NII).
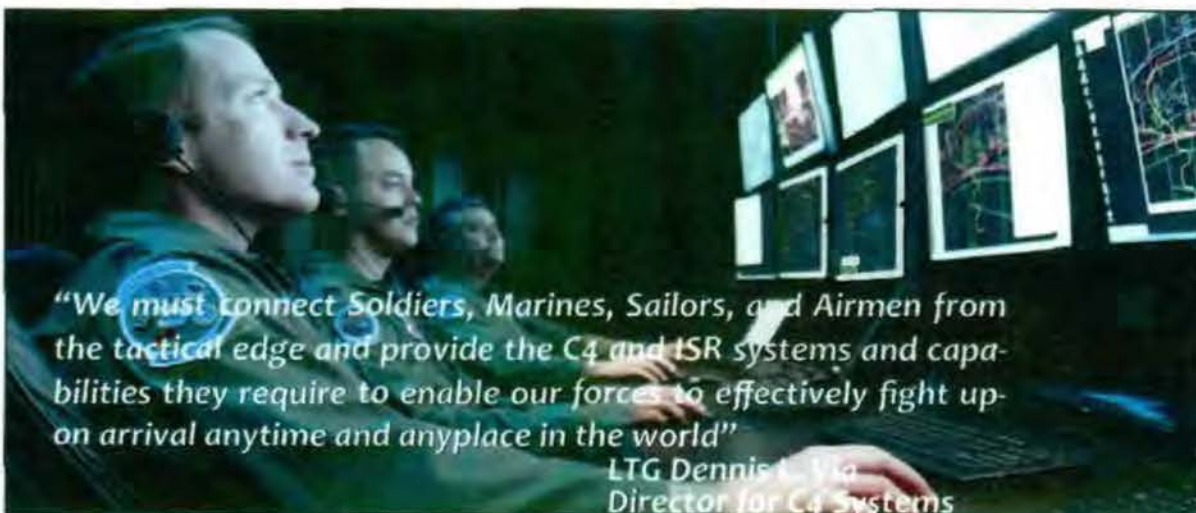

"The technology is not what paces us, it's the culture...and that needs to change."

General Cartwright
Vice Chairman, JCS

1 Nov 2005: Joint Staff J-6, USJFCOM, and US Army Signal Center and School supported by the Services; developed the Joint C4 Planners Course under JROCM 237-05. The JC4PC is a four week course to train officers, warrant officers and senior NCOs to plan complex joint communications networks using doctrinal techniques to meet documented JTF operational needs. Pilot courses were conducted in 2007 and first official course in Jan 2008. J-1 issued School Code S356 to C4 Planners Course and 277 joint billets were coded to require graduates of the course fill these billets.

2006:

- J-6 Coordinated INFOCON level changes with combatant commands, Services and agencies to assist in the adjudication and clarification of USSTRATCOM guidance and directives that are contentious among the combatant commands. Provide the CJCS the operational impact of implementation of INFOCON change levels.

- J-6 teamed with ASD(NII) for the Joint Airborne Network review to determine near-term operational capabilities for Joint Airborne Networking.

- Interoperability Testing - J-6 Initiated three "streamlined" interoperability certification programs to facilitate Joint Staff approval of program requirements, acknowledge that interoperability testing for numerous programs (low-risk, slated to expire) has little pay back, and exempted select systems which do not require joint interoperability. Initiatives: Tailored Information Support Plan (TISP), Legacy Systems Waiver, and Interoperability Test Exemption programs saved Combatant Commands, Services, and Agencies (CC/S/A) an estimated $14.036M. During FY06, J-6 assessed almost 500 requirements documents, granting over

777th Expeditionary Airlift Squadron joint airborne battle staff providing joint communications support to ground forces Iraq at Joint Base Balad, Dec 2008.

100 Interoperability & Supportability Certifications.

- Warfighting Mission Area (WMA) Information Technology Portfolio Management (IT PfM). Developed a WMA process to implement DOD IT portfolio management direction to manage IT (to include National Security Systems (NSS)) investments (IT acquisition programs, information systems, and initiatives) in the joint WMA. Codified the WMA IT PfM process in CJCSI 8410.01

- C2 Initiative Program (C2IP) supported 49 COCOM submissions totaling ~ $10.6M; these funded projects contributed positively towards the COCOMs ability to implement near-term improvements to their C2 system which aided in the effort to win GWOT, transform for the future and strengthen joint warfighting. Capabilities provided include: Vital communications systems to embedded training teams in Afghanistan. Training tools and systems to defend against cyber attacks. Equipment to bring in secure cellular phones into secure conferences with minimum impact to voice quality. Deployable communications to support

"We must connect Soldiers, Marines, Sailors, and Airmen from the tactical edge and provide the C4 and ISR systems and capabilities they require to enable our forces to effectively fight upon arrival anytime and anyplace in the world"

LTG Dennis L. Via
Director for C4 Systems

disaster relief and interface with first responders. Deployable secure wireless networks to reduce set-up time and transportation footprint. Ability to share information with Partnered Nations. Ability to automate MILSTAR COMSEC key management process. Ability for USSOUTHCOM to meet newly assigned Unified Command Plan responsibilities.

- J-6 SATCOM Efforts. UHF Satellite Constellation Optimization The UHF Satellite Constellation was optimized and is greatly benefiting the combatant commands by providing over 15 additional tactical satellite channels in key areas of the world. The effort began in Jan and was completed late Mar 07.

- In response to USCENTCOM J-6 request for help, the Joint Staff J-6 developed a Spectrum Tiger Team, including participants from Joint Spectrum Center, Joint UAS Center of Excellence, Army Frequency Management Office, CCJ2/J3/J6 to identify and resolve issues causing spectrum saturation in strategically significant areas in support of the Global War on Terrorism.

- J-6 worked with combatant commands, Services, agencies and DISA to test the first Net-Centric Enterprise Services (NCES) collaboration tool. The unclassified tool is available to DOD users via the Defense Knowledge On-Line portal.

- Engaged NATO to influence international and coalition interoperability and info sharing through involvement in NATO Consultation, Command, and Control Board (NC3B) and by providing representation to two NATO NC3B Sub-Committees and their subordinate working groups

- Allied Communications Publication (ACP) 145 Gateway: J-6 worked with HQ DISA to ensure the US/UK bi-lateral efforts to implement the ACP 145 Gateway-to-Gateway protocols.

January 2006: J-6 initiated a Net-Centric Operational Environment (NCOE) Tiger Team to develop NCOE Joint Integrating Concept and illustrative CONOPS to serve as the basis for a Capabilities Based Assessment.

January 2006: J-6 transferred three military billets to USJFCOM to staff the C2 FCB.

20 March 2006: Updated Joint Pub 6-0 to describe the GIG, Joint network operations and joint Comm system operations, planning and management.

May 2006: J-6 launched a robust Net-Ready Key Performance Parameter (NR-KPP) on-line course with
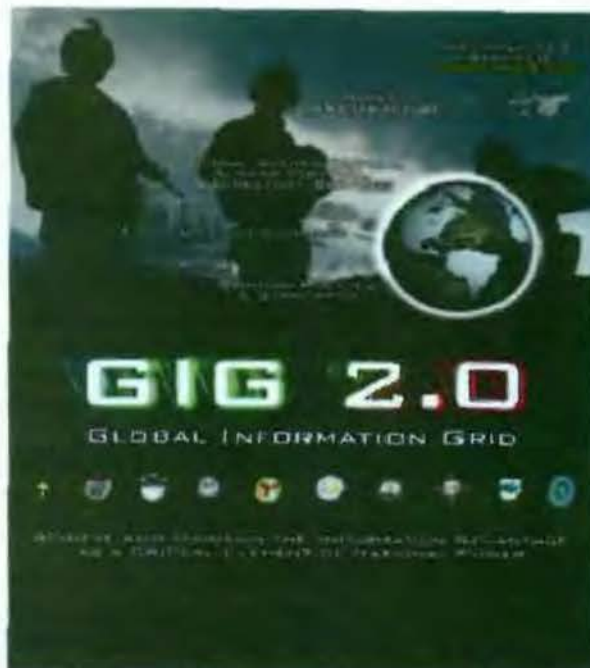
Global Information Grid 2.0

the expertise and guidance of the Defense Acquisition University (DAU).

30 June 2006: Established policies and procedures for the Warfighting Mission Area (WMA) Information Technology (IT) Portfolio Management (PfM) and Communities of Interest processes.

August 2006: J-6 developed CJCSI 6285.01 Multinational Information Sharing (MNIS) Operational Systems Requirements Management Process.

October 2006: J-6 in collaboration with USD(I), USD(P), ASD NII and J5, drafted a DOD Information Sharing Strategy (ISS) signed by the DOD CIO.

October 2006: J-6 Expanded combatant command Multinational Information Sharing (MNIS) capabilities by installing CENTRIXS capabilities to 29 new locations, developing a new cross enclave capability to collapse 13 existing CENTRIXS networks in USCENTCOM into one infrastructure, and drafting the MNIS Initial Capabilities Document to capture future requirement. J-6 continues progress to allow AUS/CAN/UK access to the US SIPRNET, establishing NATO Secret Wide Area Network (NS-WAN) access in the Pentagon, and supporting the development of USCENTCOM's Common Operating Picture (COP) feed to the UK Joint Operations Command System (JOCS). J-6 supported development of a five-nation Web capability to share classified information between AUS, CAN, NZL, UK, &

Command and Control

Counter - Radio Controlled Improvised Explosive Devices (C-RCIED), to include the use of Counter-Radio Controlled Improvised Explosive Device Electronic Warfare (CREW) systems, device mechanisms and techniques, interoperability, compatibility testing, and Counter IED Tactics, Training, Policies (TTP) development. Developed universal CREW field test set in response to CENTCOM JUONS. Performed highly successful in-theater Quick Reaction testing resulting in high level policy changes regarding inter-agency Electronic Counter-Measures (ECM) compatibility requirements and coalition/Government of Iraq CREW supply decisions. Developed and currently manage a J-6 Electronic Attack/Spectrum Website and Data Repository linked off the Joint Improvised Explosive Device Defeat Organization (JIEDDO) home page – getting more than 5,000 hits per month.

1 February 2007: J-6 expanded the scope of CJCSI 6810.01 and for the first time identified critical NC3 systems at Presidential support nodes and platforms.

US and influencing international and coalition interoperability and info sharing through involvement in NATO Consultation, Command, and Control Board (NC3B) and its sub-structure.

October 2006: J-6 published the "Joint Net-Centric Operations Campaign Plan," to reflect strategic guidance and progress in net-centric concepts.

December 2006: J-6 developed the National Military Strategy for Cyberspace Operations (NMS-CO) signed by the SecDef in December 2006. J-6 established a Cyberspace Integration Group, co-led by USSTRATCOM, to develop the NMS-CO Implementation Plan. J-6 initiated actions to establish cyberspace definitions and joint doctrine, as well as the Joint Operational Concept for Cyberspace Operations.

2007: J-6 Implemented a process for DOT&E the to brief *the Services, Agencies, Combatant Commands at the* Interoperability Panel (IP) and Military Communications Electronics Board (MCEB) on any interoperability issues found during combatant command interoperability and information assurance assessments.

February 2007: Improvised Explosive Device – Defeat (IED-D). J-6 chaired the bi-weekly IED-D VTC with over 20 different commands focusing on all aspects of *defeating the IED threat. Additionally, we actively work* electromagnetic spectrum de-confliction. The Spectrum Management division chairs the Air-Ground compatibility Tiger Team to mitigate the #1 MNC-I spectrum/ interoperability issue and we assisted with the drafting of a National Security Presidential Directive for a US Government Inter-Agency ECM policy. The effort resulted in POTUS signing HSPD - 19 "Combating Terrorist Use of Explosives in the United States." Focus *is on defeating the IED threat including related issues* such as electromagnetic spectrum access and use,

March 2007: The CENTRIXS Cross Enclave Requirement was submitted IAW CJCSI 6285.01 as an enhancement to the current operational Combined Enterprise Regional Information Exchange System (CENTRIXS) Networks. The COCOMs required a cross enclave capability to converge the multiple SECRET coalition networks to a single environment and infrastructure architecture. CENTRIXS is a combination of separate multilateral and bilateral networks that provide the current capability for U.S. and coalition partners to securely share mission information within specific communities of interest (COI). There are currently over 50 multilateral and bilateral networks that exist to support COCOM coalition information sharing.

April 2007: J-6 combined CJCSI 6130.01C (The Chairman's Master Positioning, Navigation and Timing Plan) with CJCSI 6140.01B (the updated GPS SAASM Requirements document) and published the combined

requirements and policy in CJCSI 6130.01D.

2 July 2007: J-6 expanded the scope of CJCSI 6811.01 and for the first time identified the NC3 nodes and platforms that required protection from Nuclear fallout and high yield explosives. Also added were the firebreak and relay element performance criteria.

24 September 2007: The J-6 developed the NMS-CO implementation plan signed by the SecDef identifying tasks, responsible organization, and milestones to develop the cyberspace warfighting domain.

1 November 2007: J-6 developed the Warfighting Mission Area Enterprise Architecture v1.0.

2008: J-6 led the effort to have cyberspace declared a warfighting Domain. In May of 2009 the DepSecDef published DOD's definition of cyberspace and defined cyberspace as a warfighting domain.

2008: In support of the Joint Staff Cyber Capability six billets were transferred from J-6 to J-3/J-5.

March 2008: J-6 Developed the Global Information Grid (GIG) 2.0 Characteristics.

April 2008 to July 2009: J6 major reorganization; MCEB and Information Integration Divisions reconfigured and combined into Net Centric Capabilities Division; JFCOM C2FCB support dissolved and placed under JFCOM LNO; PfM contractors added; created J65 (April 08); dissolved J65 (July 2009)

May 2008: Due to a funding cut C2IP funding was cut for POM cycle 2010-2015, and program moved to USJFCOM. Other C2 initiatives will compete for funding through the Combatant Command Initiative Fund.

28 May 2008: J-6 developed CJCSI 6245.01A "Joint Net-Centric Training."

June 2008: DJ6 met with VCJCS to request restoral of the C2IP budget. VCJCS directed future funding be obtained from the CCIF program

August 2008: J-6 assisted ASD(NII) in the development of GIG 2.0 to identify and describe required enterprise IT capabilities for Net-Centric Operations and Warfare, chart the policy course for building and acquiring Net-Centric systems capabilities, and support DOD transformation to a Net-Centric enterprise.

11 March 2009: J-6 Developed the Global Information Grid (GIG) 2.0 Concept of Operations.

April 2009: ASD(NII) in direct coordination with J-6, signed into effect the Information Sharing Implementation Plan developed in coordination with the combatant commands, military departments, and defense agencies. It identifies focus areas and tasks with associated offices of primary responsibility to achieve key information sharing improvements, targeting current and future operations and technologies, within a 36-month timeframe. This plan leverages the successes of existing capabilities and ongoing initiatives that are internal and external to DOD and supports the National Strategy for Information Sharing and other federal initiatives that include areas of cooperation with the Director of National Intelligence, activities from the Federal Information Sharing Environment Implementation Plan, and development of the National Command and Coordination Capability in conjunction with the Department of Homeland Security.

29 May 2009: J-6 developed the Initial Capabilities Document for the Global Information Grid 2.0.

"We must be capable of responding at the speed my job requires... I need a Battle Rhythm and the situational awareness that helps me provide the best military advice to the SecDef and the President quickly"

ADM Mullen
Chairman, JCS

July 2009: United States Pacific Command (USPACOM) conducted a CCER Proof-of-Concept that laid the foundation to establish a single mission partner warfighting environment for migrating the 50 CENTRIXS network's users and data within this environment. The CCER Pilot also laid the foundation towards implementing future MNIS Objective requirements. The CCER pilot integrated 3 CENTRIXS networks from CENTCOM, PACOM and SOUTHCOM, and 2 bilateral networks,.

August 2009: J-6, USSTRATCOM, and AFSPC develop the Joint Space Communications Layer (JSCL) Concept of Operations (CONOPS) and incorporate it into the JSCL Initial Capabilities Document (ICD).

December 2009: J65A-Spectrum Division hosted a DOD Spectrum Workshop that included 261 people from the Army, Navy, Air Force, Marine Corps, Coast Guard, National Security Agency, Defense Information Systems Agency, White House Communications Agency, the ten Combatant Commands (COCOMs) and three regional COCOM sub-commands, the National Telecommunications and Information Administration, the Federal Communications Commission and numerous Defense Support Contractors. The conference met the goal of informing civilian leadership about the criticality of spectrum in military operations in developing spectrum management solutions for key issues facing DOD.

2010: Converted Army authorization to create and hire DJ6/SES billet. RMD 802 decreased J-6 contractors by 7 and increased civilian authorizations by 4.

February 2010: A software release improved the Chairman's SATCOM Database (SDB) resulting in a more capable and accurate repository for the Department's satellite communications requirements. The update simplified "media codes" to specify the frequency band vice a SATCOM system, allows users to visually depict a requirement's network topology, standardized Network definitions, and included additional user features to assist with data entry and validity.

April 2010: Interim Authority to Operate (IATO) is issued to allow for operational (SECRET REL HIGH) data to pass between the CCER Phase I DISA Trusted Network Environment (TNE) enclave located at the General Dynamics C4 Systems (GDC4S) facility in San Antonio, Texas, the Global Counter-Terrorist Task force (GCTF) CENTRIXS enclave located at Defense Enterprise Computing Center Pacific (DECC PAC), and TNE interconnections to the Multi-Lateral Enduring Contingency (MLEC), Cooperative Maritime Forces Pacific (CMFP) and Combined Maritime Forces Central (CMFC) Communities of Interest (COIs) with 3 basic services (e.g., SMTP email with attachments, chat without attachments, and file library storage with controlled database access). Since the IATO, the Defense Information Systems Agency

Service Regimental Affiliation/Communications Badges

United States Army   United States Navy   United States Air Force

(DISA) have implemented the following common services; Single Secret node with local redundancy for critical components, Computer Network Defense (CND), Network Operations (NetOps) Compliance and Information Assurance controls for COI separation and authorized cross-COI information exchange.

May 2010: In coordination with the Combatant Commands, Services and Agencies, J-6 revised Joint Pub 6-0 which updated information on Cyberspace, GIG characteristics and the "Aerial Layer"

May 2010: The National Guard Bureau (NGB), NORAD and NORTHCOM, in coordination with J-3 and J-6, developed the Strategic Operations Information Sharing SOIS) Capstone document, which described information products, locations, and timelines for command center information sharing in the Homeland Security, Homeland Defense, Civil Support, Humanitarian Assistance and Disaster Relief missions. The effort is combined with DOD, Department of Homeland Security, Federal Law enforcement, and Executive office staff and will eventually include state, local and tribal agencies in coordinating all-hazards incident prevention, detection, response, and recovery. Specifically, the SOIS is intended to enable shared situational awareness and collaboration, and enhanced operational planning, coordination, execution, and decision making among the nation's command centers.

June 2010: J-6, USSTRATCOM, and AFSPC complete work on the Joint Space Communications Layer (JSCL) Reference Document (JRD), which includes a revalidation of the minimum SATCOM requirements for the DOD and intelligence community.

Joint Information Environment (JIE)

August 2010: Developed the Joint Information Environment (JIE) program: The JIE is to synchronize/ integrate C4ISR capabilities and services delivered in a shared, secure GIG using standardized operational and technical guidance.

JOINT STAFF
J-6 MARCH 2011

J6

CONNECTING THE WARFIGHTER

DOD Efficiencies & J-6 Disestablishment

9 August 2010: The Secretary of announced the elimination of the Joint Staff J-6 and the Assistant Secretary of Defense Networks Integration and Information (ASD/NII). Additionally, the SecDef announced the elimination of the Business Transformation Agency (BTA) and recommended closure of United States Joint Forces Command (USJFCOM).

August 2010: The Secretary of Defense directed the consolidation of IT infrastructure to achieve savings in acquisition, sustainment, and manpower costs and to improve DoD's ability to execute its missions while defending its networks against growing cyber threats.

25 Jan 2011: Resource Management Decision (RMD) 700A3 approved. J-6 Funding was $38.4M FYDP, $31.1M to efficiencies / $7.3M transferred to DoD CIO / USCYBERCOM. 33 contractors eliminated / 21 Full-Time Equivalents (FTEs) transferred.

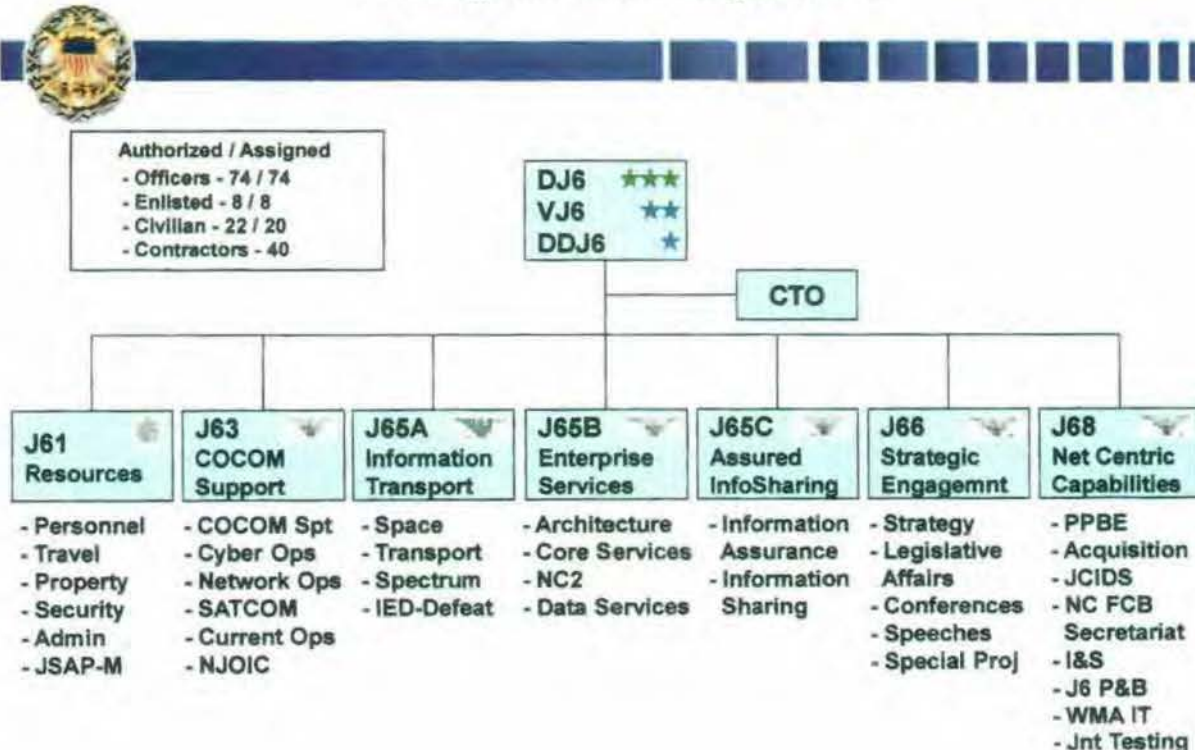**3 March 2011**: DoD Efficiencies Transition Plan briefed to key stakeholders.

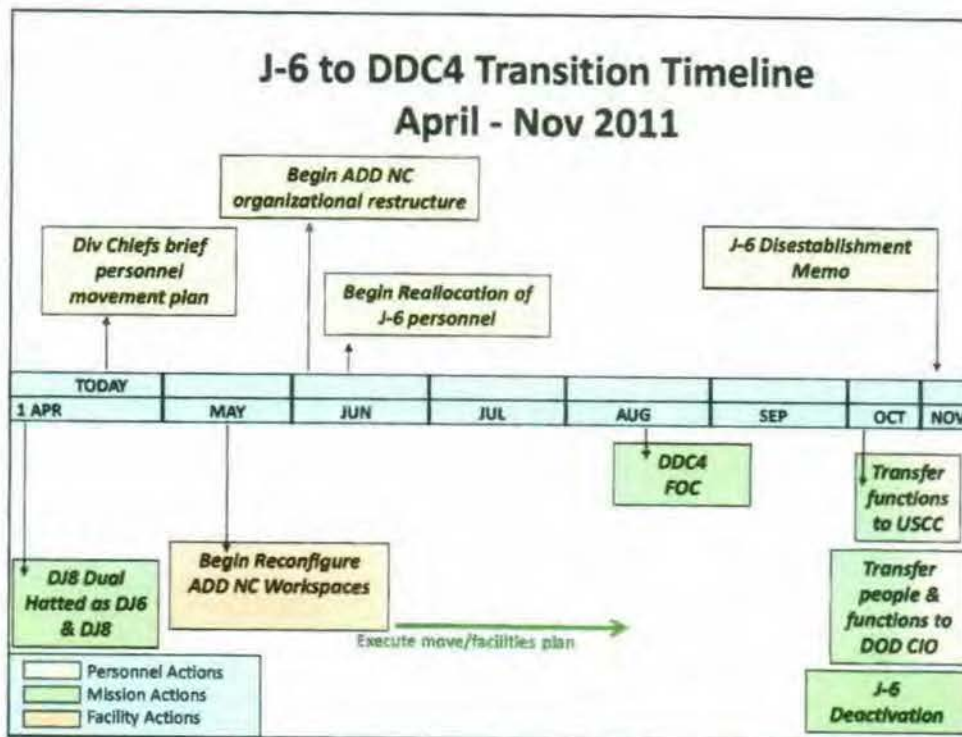**11 March 2011**: J-8 facility plan completed.

18 March 2011: Effective 4 April 2011 the C2 and Net-Centric FCB's were combined and function as the C2-NC FCB.

1 April 2011: As a result of the Secretary of Defense's decision to disestablish the J-6, the position of Director, J-6, was vacated on 1 April 2011. Until such time as the J-6 Directorate is officially disestablished, the Director, J-6, remains a 10 USC § 601 position of importance and responsibility. As such, the General or Flag officer filling this billet must be nominated for the position and appointed to the grade of 0-9 by the President, by and with the advice and consent of the Senate. To ensure the continued functionality of the J-6 Directorate during this time of re-organization, consistent with the legislation, the DJ8 was designated to serve in a supervisory role over the J-6 Directorate, until such time as the J-6 Directorate Is disestablished.

29 April 2011: the C2-NC FCB renamed C4/Cyber FCB.

J-6 Organization - August 2010

Authorized / Assigned
- Officers - 74 / 74
- Enlisted - 8 / 8
- Civilian - 22 / 20
- Contractors - 40

DJ6 ★★★
VJ6 ★★
DDJ6 ★

CTO

J61 Resources	J63 COCOM Support	J65A Information Transport	J65B Enterprise Services	J65C Assured InfoSharing	J66 Strategic Engagemnt	J68 Net Centric Capabilities
- Personnel	- COCOM Spt	- Space	- Architecture	- Information Assurance	- Strategy	- PPBE
- Travel	- Cyber Ops	- Transport	- Core Services	- Information Sharing	- Legislative Affairs	- Acquisition
- Property	- Network Ops	- Spectrum	- NC2		- Conferences	- JCIDS
- Security	- SATCOM	- IED-Defeat	- Data Services		- Speeches	- NC FCB Secretariat
- Admin	- Current Ops				- Special Proj	- I&S
- JSAP-M	- NJOIC					- J6 P&B
						- WMA IT
						- Jnt Testing

J-6 to DDC4 Transition Timeline
April - Nov 2011

2 November 11: *The Chairman approved the disestablishment of Joint Staff J-6.*

1 June 2011: Standup and IOC of DDC4, Joint Staff J-8 Combining elements of USJFCOM J-8 and Joint Staff J-6.

16 September 2011: MOU signed between the DOD CIO and the Director Joint Staff transferring designated functions, five military, two civilian billets and funding for three contractors from the Joint Staff to the DOD CIO IAW RMD 700A3.

30 September 2011: MOU signed between USSTRATCOM and the Joint Staff for the transfer of functions and associated resources pertaining to SATCOM to USSTRATCOM IAW RMD 700A3.

October 2011: The Director J-8 dual-hatted as the Director J-6 requested that the Chairman disestablish the Joint Staff J-6.

Deputy Director for Command, Control, Communications and Computer Systems (DDC4), Joint Staff J-8

DDC4 Priorities

FUTURE MISSION NETWORK (FMN)

SPECTRUM RE-ALLOCATION

DATA ARCHITECTURE

J6 COCOM CONFERENCE
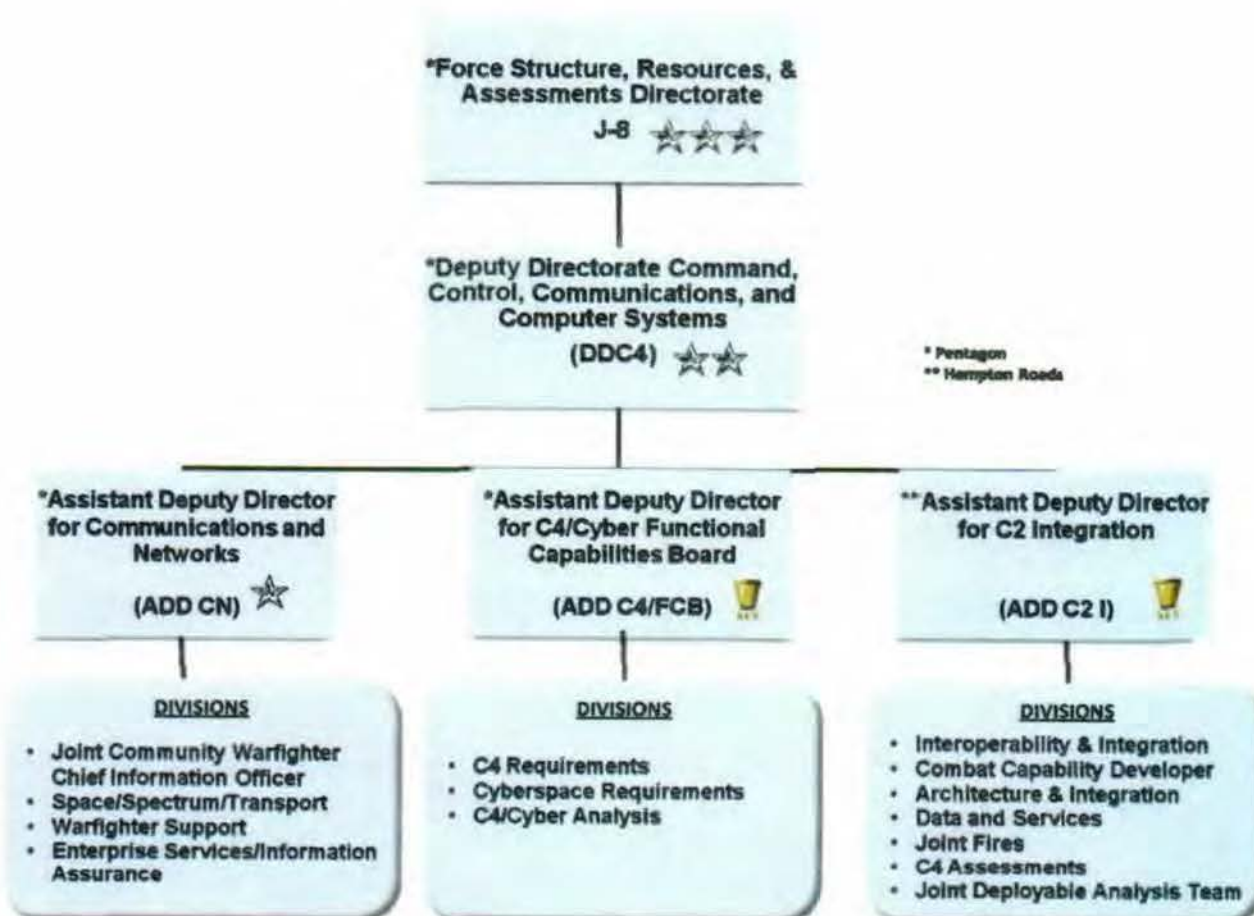
BUILDING RELATIONSHIPS W/ COCOMS

The Force Structure, Resources, and Assessment Directorate (J-8) conducts studies, analysis, and assessments, and evaluates plans, programs, and strategies for the Chairman of the Joint Chiefs of Staff (CJCS). The DJ-8 serves as the Joint Requirements Oversight Council (JROC) Secretary and as the Chairman of the Joint Capabilities Board (JCB). In these capacities, the DJ-8 orchestrates Joint Staff support of the capabilities development process through the Joint Capabilities Integration and Development System (JCIDS) and oversees the Functional Capabilities Board (FCB) process.
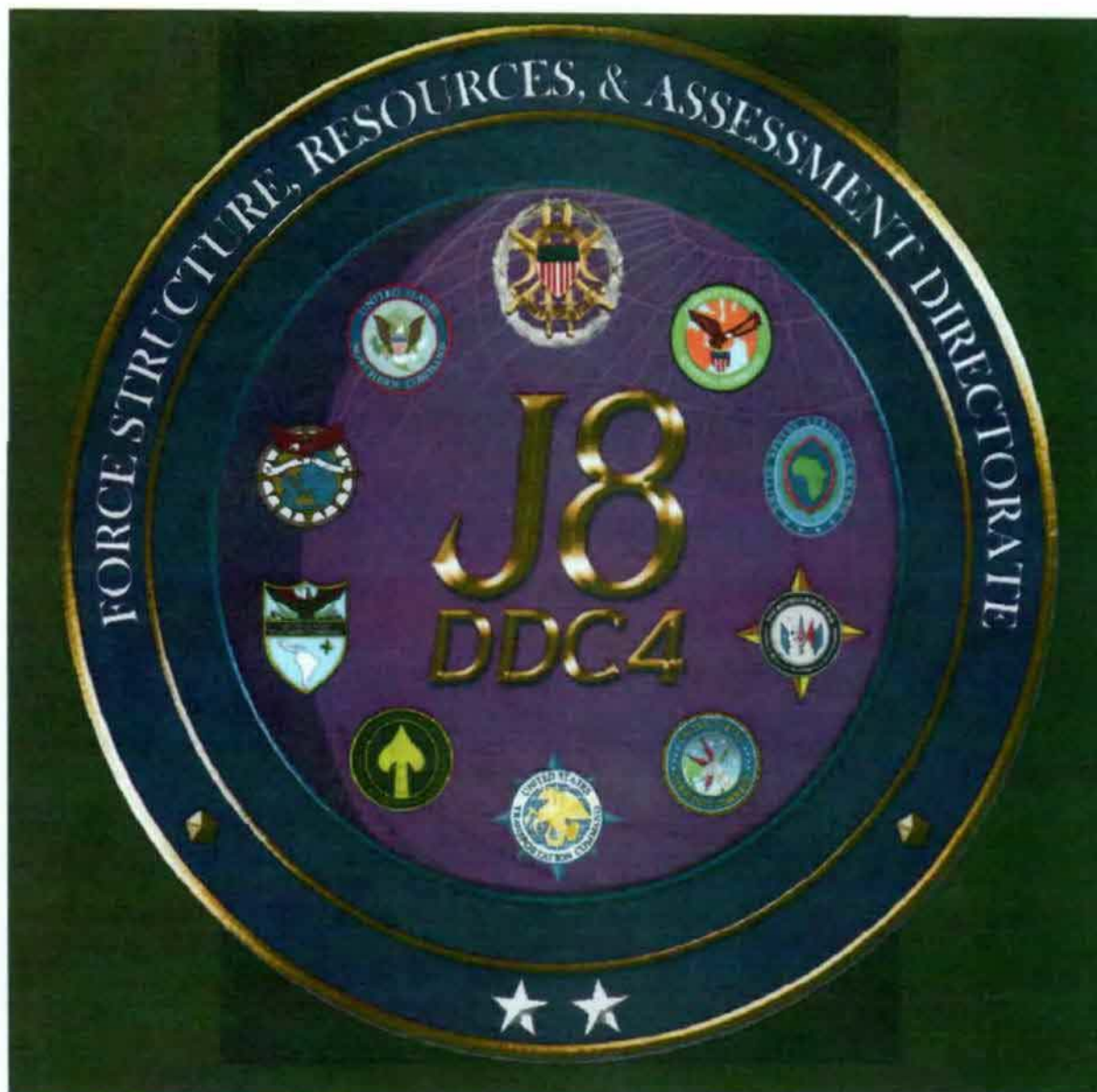
The Deputy Director for Command, Control, Communications and Computer Systems (DDC4) is under the Joint Staff J-8. It has three assistant deputy directorates - C4/Cyber FCB, Communications and Networks, and Command and Control Integration. The DDC4 is distributed between the Pentagon, Norfolk and Suffolk VA.

and Eglin Air Force Base, FL.

The Joint Staff J-6 directorate had approximately 150 personnel. Joint Forces Command J-8 C2 had approximately 700 personnel. J-8 DDC4 absorbed most of the functions of both and after the reduction has approximately 400 personnel .

The DDC4 is responsible for overseeing the C4)/Cyber FCB, overseeing assessments and evaluation efforts to facilitate and integrate C4 initiatives, advising the chairman and director on C4 capability development and integration, and supporting the integration of approved C4 capability needs across DoD decision support processes. The DDC4 will continue to identify short-and long-term joint, multinational and interagency capability gaps and work with other combatant commands, the services, coalition partners and agencies to provide integrated capabilities.

*Force Structure, Resources, & Assessments Directorate
J-8 ★★★

*Deputy Directorate Command, Control, Communications, and Computer Systems
(DDC4) ★★

* Pentagon
** Hampton Roads

*Assistant Deputy Director for Communications and Networks
(ADD CN) ★

*Assistant Deputy Director for C4/Cyber Functional Capabilities Board
(ADD C4/FCB)

**Assistant Deputy Director for C2 Integration
(ADD C2 I)

DIVISIONS

- Joint Community Warfighter Chief Information Officer
- Space/Spectrum/Transport
- Warfighter Support
- Enterprise Services/Information Assurance

DIVISIONS

- C4 Requirements
- Cyberspace Requirements
- C4/Cyber Analysis

DIVISIONS

- Interoperability & Integration
- Combat Capability Developer
- Architecture & Integration
- Data and Services
- Joint Fires
- C4 Assessments
- Joint Deployable Analysis Team

Deputy Director for Command, Control, Communications and Computer Systems (DDC4), Joint Staff J-8

DJ8 and DDC4 Leadership

Lt Gen Larry O. Spencer, USAF,
Director, Force Structure, Resources and Assessment, J-8

Maj Gen Ronnie D. Hawkins Jr., USAF,
Deputy Director Command, Control, Communications and Computer Systems
(DDC4)

Brig Gen Linda R. Medler,
USAF, Assistant Deputy
Director Communications
and Networks

Mr. Stuart Whitehead, SES,
Assistant Deputy Director
Command and Control
Integration (ADD C2I)

Mr. Martin Westphal, SES,
Assistant Deputy Director
C4/Cyber Functional
Capability Board

Military Communications-Electronics Board

The Military Communication-Electronics Board (MCEB) is a senior leader communications forum formally established in Oct 1958 that provides recommendations and advice on operational communications matters to the CJCS, VCJCS, DOD CIO and other senior leaders and Forums. The MCEB operates under the authority of DODD 5100.35 and is chaired by the Director of J-6.

The MCEB was created under the direction of the Office of the Secretary of Defense to consider those military communication-electronics matters, including those associated with National Security Systems (NSS) as defined in Public Law 104-106, "Subdivision E of the Clinger-Cohen Act of 1996", referred to it by the SECDEF, the CJCS, the DOD CIO, Secretaries of the Military Departments, and the Heads of the other DoD Components. The MCEB Serves as a military C4 "Think Tank." It provides a forum for combatant command Service and agency C4 "warfighter" issues. It Informs the JCIDS process, vets DOD C4 issues among the DOD C4 leaders and compliments and informs DOD CIO Governance. The MCEB mission is to:

- Provide leadership on operational military C4 matters/ issues affecting DoD components, other US governmental departments and agencies, and foreign nation representatives.

- Coordinate C4 operational guidance and direction among combatant commands, Services, and Agencies.

- Provide recommendations on military C4 matters through the CJCS to the Secretary of Defense, the Joint Chiefs of Staff, combatant commands, Services, agencies, and other DoD components.

- Inform the DoD Chief Information Officer (CIO) Executive Board of all MCEB-related matters requiring DoD CIO attention.

Members

DJ8 (Chair) (previously DJ6), DDC4 (combatant command representative) (previouslyVJ6), USA, USN, USMC, USAF, USCG, NSA, DIA, DISA , DOD CIO (previously ASD(NII) non chartered). The MCEB has four panels they are:

- Frequency "spectrum management" (FP)

- Military Comm Procedures & Pubs "ACPs/ JANAPS" (MCP)

Military Communications - Electronics Board

25 July 1994

MCEB History:

- 1942 - Established: Joint Communications Board (2 USA/ 2 USN)
- 1948 - Reconstituted: Joint Communications-Board Committee (USAF included)
- 1949 - Revised: SECDEF Charter (DIR OF C-E, JCS added)
- 1958 - Formally Established: MCEB
- 1962 - Designated: DCA Director as Chairman (DCA & NSA added)
- 1985 - Transferred Chairmanship to Director C3S
- 2011 - Transferred Chairmanship to Director J-8

Recent MCEB Accomplishments:

- Frequency Panel
  - ◊ Developed DOD Positions for World Radio Communication Conference (WRC) 2012
  - ◊ Reviewed acquisition documents to ensure equipment delivered to Warfighters does not have operational limitations due to spectrum
  - ◊ Developed positions and defended DOD's interests for International Registration of Satellites

- Interoperability Panel
  - ◊ Codified $45M since 2008 in cost avoidance initiatives: Tailored Information Support Plans (TISP), legacy waivers, test exemptions
  - ◊ Ensured reuse of testing results for joint certification
  - ◊ Updated Net Ready KPP guidance, joint interoperability policy and procedures

- Interoperability Certification Panel
  - ◊ Issued 30+ Interim Certificates to Operate per month (capability fielded to warfighter)
  - ◊ Certified 300+ programs per year
  - ◊ Approved test exemptions or legacy waivers

- Military Communications Procedures and Publications Panel
  - ◊ Ensured all Allied Communications Publications (ACPs) were accurate and current
  - ◊ Promulgated 62 changes to ACPs via Joint Armed Forces Publication (JAFPUB) messages
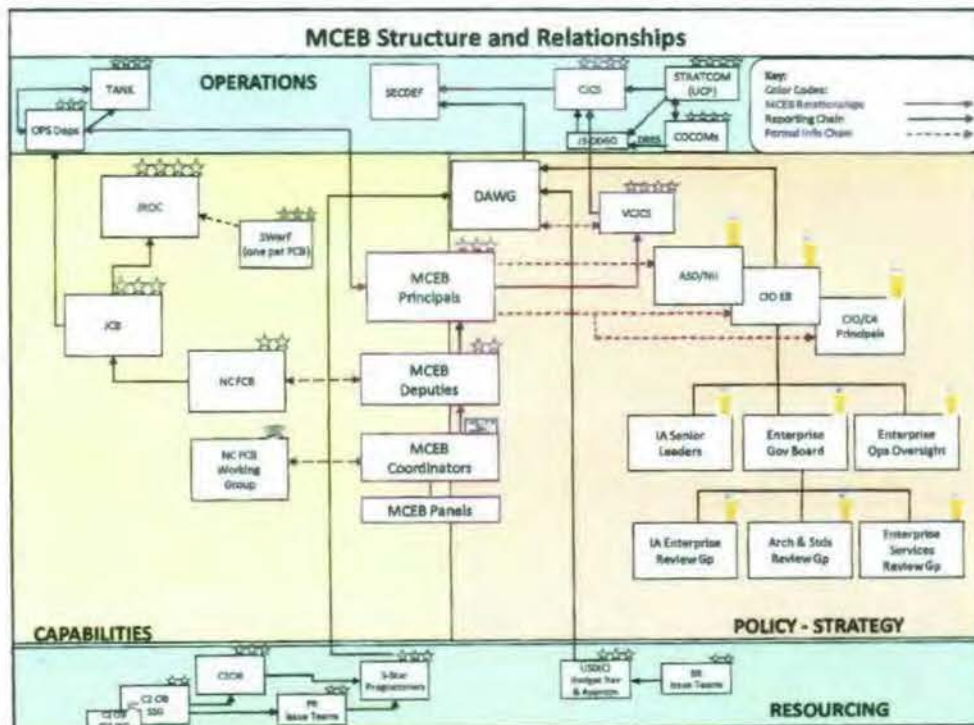
MCEB Structure and Relationships

Combined Communications-Electronics Board

The Combined Communications-Electronics Board (CCEB) is a five-nation joint military communications-electronics (C-E) organization whose mission is the coordination of any military C-E matter referred to it by a member nation. The member nations are Australia, Canada, New Zealand, the United Kingdom and the United States of America (AUSCANNZUKUS).

The CCEB maximizes the effectiveness of the Warfighter in joint and combined operations by optimizing information and knowledge sharing and to advance C4 Interoperability for combined operations through policy, procedures, publications, and participation.

CCEB Meeting 1995 — Chair Lt Gen Woodward (Front Left)

The first high-level proposals for a structure to formulate combined communications-electronics policy were exchanged between the UK and US in March 1941. The Combined Communications Board (CCB) held its first meeting under Lord Mountbatten in Washington, D.C. on 24 July 1942. The CCB grew to 33 sub-committees established to consider all communication specialist areas. Canada became a full member of the organization in 1951, Australia in 1969 and New Zealand in 1972 when the organization was renamed the Combined Communications-Electronics Board. In 1986 the CCEB broadened its terms of reference to include communication and information systems in support of command and control. CCEB interoperability activities have *always been coordinated with those of NATO and* the US Military Communications-Electronics Board (MCEB). Recently, increased attention has been given to coalition C4 interoperability and capability development activities that provide tangible deliverables supporting the maximization of coalition warfighter effectiveness.

In 2001, the Vice/Deputy Chiefs of the CCEB nations agreed the CCEB should take a leading role in facilitating coordination on C4 matters between the nations and their various single Service groups, clearly showing the continuing high-level support for the CCEB in C4 interoperability coordination.

Liaison and coordination with other nations and organizations is recognized as a key enabler for the future development and delivery of C4 capability. Attendance at CCEB meetings is normally limited to military or non-military personnel of the CCEB nations. However, application for attendance as an observer to specific meetings of interest may be made to the executive group Chair, and is subject to the unanimous agreement by all CCEB member nations.

Synchronizing C4 Efforts with other C4 Multinational Organizations - as the only combined organization whose focus is entirely on C4 interoperability matters, the CCEB has taken a leadership role in synchronizing its C4 efforts among the single Service Fora (AUSCANNZUKUS NAVAL C4, the Air and Space Interoperability Council (ASIC), the American-British-Canadian-Australian Armies (ABCA)), Multinational Interoperability Council (MIC), The Technical Cooperation Program (TTCP) and NATO.

The CCEB does not control national procurement initiatives, or mandate the use of particular standards; future equipment acquisition will be

strongly influenced by the standards, policies and procedures that the CCEB develops. It provides a forum whereby national programs may be aligned to achieve interoperability, while recognizing that interoperability will only occur if nations use common agreed standards in their procurement programs. Historically, CCEB nations have had a major positive impact on NATO"s wider coalition C4 (technical) interoperability through the generation and distribution of communications procedural documents titled Allied Communications Publications (ACPs). The NATO alliance and many like minded nations have come to depend upon ACPs for their communications operations and the CCEB has thus become a respected "communications standards" organization. Each nation nominates a senior representative (of Flag/General Officer level) of their national joint military Communications-Electronics organization as their Principal. Collectively, the Principals form the "Board". The Chair of CCEB rotates annually among member nations' J6s and the US Deputy Director for C4 (DDC4) Systems, Joint Staff J-8. The DDC4 serves as the US representative to NATO Consultation, Command and Control Board (NC3B).

CCEB Structure
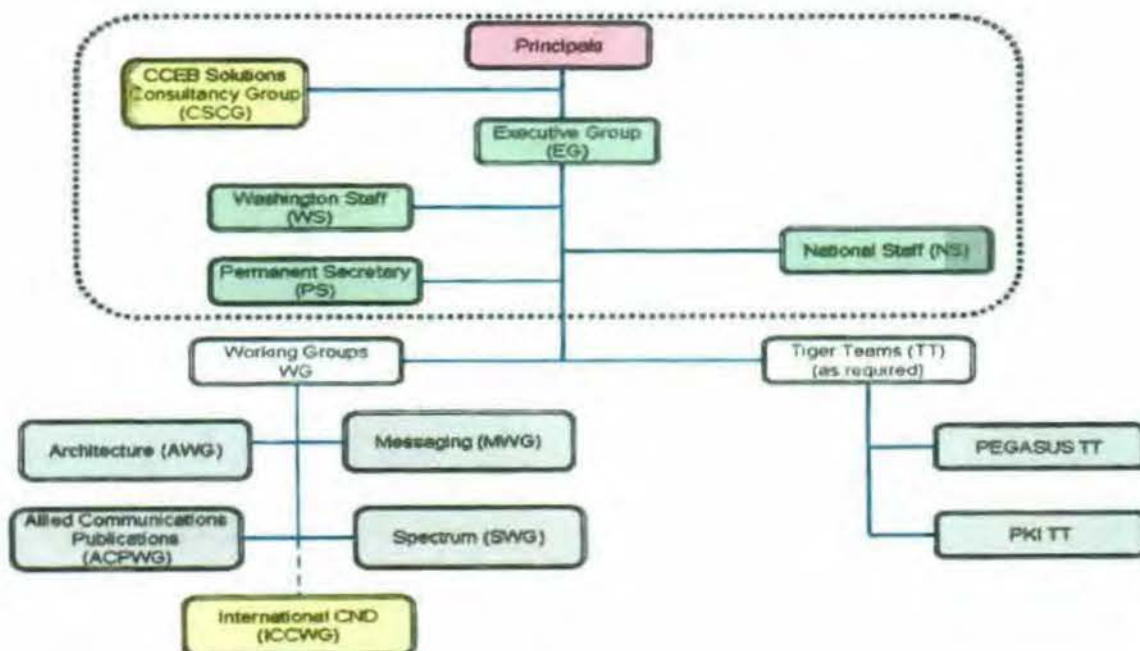
A **Functional Capabilities Board** **(FCB)** is a permanently established body that is responsible for the organization, analysis, and prioritization of joint warfighting capabilities within an assigned functional area within the Joint Capabilities Integration and Development System (JCIDS) analysis process. Each FCB is responsible for all aspects, materiel and non-materiel, of its assigned functional area(s) and seeks to ensure that the joint force is best served throughout the JCIDS and acquisition process.

The FCBs support the Joint Requirements Oversight Council (JROC) by integrating stakeholder views in concept development, capabilities planning and force development. FCBs provide assessments and recommendations that enhance capabilities integration, examine joint priorities among existing and future programs, assess program alternatives, minimize duplication of effort throughout the Services and provide oversight in the management of materiel and non-materiel changes.

The FCBs are also responsible for assessing capabilities, priorities, and tradeoffs across the range of functional areas using the Joint Capability Areas as an organizing construct. The FCBs may initiate Capabilities-Based Assessments and provide recommendations to the JROC. Early FCBs included:

> Battlespace Awareness (J-2)
> Command and Control (JFCOM J-8)
> Force Application (J-8)
> *Force Protection (J-8)*
> Focused Logistics (J-4)
> Net-Centric (J-6)
> Force Management (J-8)
> Joint Training (J-7)

Current FCBs include :

> Battlespace Awareness (J-2)
> *C4/Cyber (J-8)*
> Force Application (J-8)
> Force Protection (J-8)
> Focused Logistics (J-4)
> Force Management (J-8)

FCBs support the Chairman of the Joint Chiefs of Staff in his title 10, USC, responsibilities of providing independent military advice to the *Secretary of Defense. FCBs provide the*

assessments and recommendations required for the JROC to validate and prioritize (if required) joint military capabilities needed to comply with the guidance provided by the Quadrennial Defense Review (QDR), National Defense Strategy (NDS), Guidance for Development of the Forces (GDF), Guidance for Employment of the Force (GEF) and National Military Strategy (NMS). FCBs serve as the link between Services, combatant commands, Office of the Secretary of Defense (OSD) and Combat Support Agencies (CSAs) on warfighting capabilities and issues.

The drive to create JCIDS was born out of a memo in March 2002 from the Secretary of Defense to the Vice Chairman, Joint Chiefs of Staff requesting a study on alternative ways to evaluate requirements. The Chairman approved the new JCIDS on 24 June 2003. CJCS Instruction (CJCSI) 3170.01 provides a top-level description and outlines the organizational responsibilities. CJCS Manual (CJCSM) 3170.01 defines performance attributes, key performance parameters, validation and approval processes, and associated document content.

The FCB process was created under CJCSI 3137.01C 12 November 2004 which cancelled CJCSI 3137.01B, 15 April 2002, "The Joint Warfighting Capabilities Assessment Process." Joint Warfighting Capabilities Assessments (JWCA) teams were teams of warfighting and functional area experts from the Joint Staff, unified commands, Services, Office of the Secretary of Defense (OSD), Defense agencies, and others conduct the assessments. During the assessments, the teams appraise various aspects of joint warfighting within their respective domains. The assessment results are vetted through the Joint Requirements Oversight Council Review Board (JRB); are approved by the Joint Requirements Oversight Council (JROC); and are then used to assist the Chairman in developing the Chairman's Program Recommendations (CPR) and the Chairman's Program Assessment (CPA).

C4 /Cyber FCB

On 4 April 2011 the C2 and Net-Centric FCB's were combined and function as the C2-NC FCB and on 29 April 2011 the C2-NC FCB was renamed the C4/Cyber FCB. The C4 /Cyber Functional Capabilities Board supports the JROC by integrating stakeholders views into concept development, capabilities planning , and force development with regard to C4/Cyber capabilities. The FCB oversees a portfolio of Net-Centric-related capabilities within the JCIDS, the Acquisition; and the Planning, Programming, Budgeting, and Execution

(PPBE) processes and ensures horizontal integration of Net-Centric capabilities across other FCB functional areas and ensures vertical and horizontal integration of C4 capabilities across National, Strategic, Operational and tactical levels

The C4/Cyber FCB derives its authority from the CJCS through the JROC, using the JCIDS process in CJCSI 3170.01. The FCB is responsible for the organization, analysis, and prioritization of joint warfighting capability needs with the assigned functional area. The C4 Cyber FCB interfaces with the other FCBs to ensure integration. With C4/Cyber initiatives and architectures and to make recommendations on related capabilities.

The C4/Cyber FCB provides:

- Assessments and recommendations that enhance capabilities integration

- Examines and prioritizes joint warfighting requirements among existing and future programs

- Assesses program alternatives

- Minimizes duplication of effort throughout the Services

- Provides oversight in the management of materiel and non-materiel solutions

JCIDS Document Approval Process
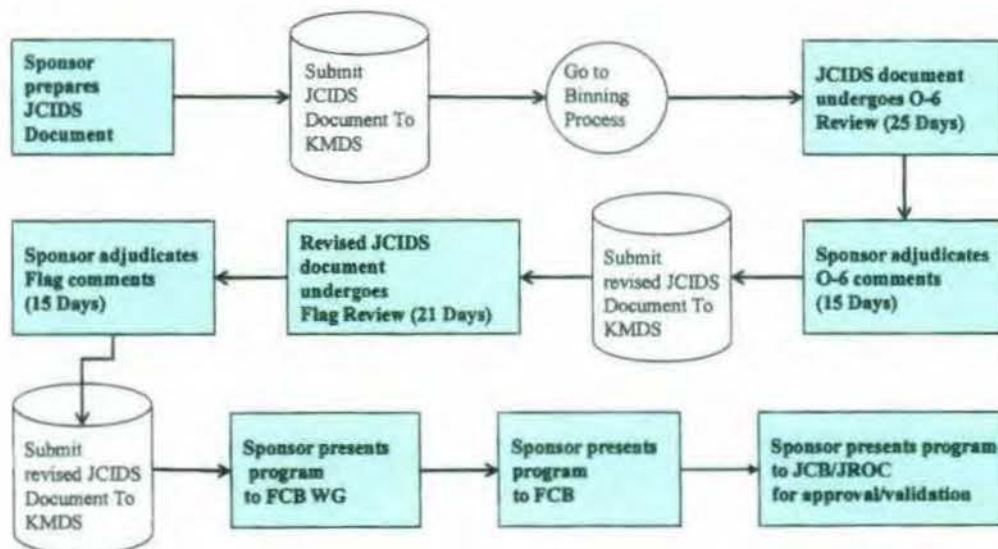
J-6 Directors

Sep 1949 – Aug 1951	Major General Harold M. McClelland, USAF
Sep 1951 – Jun 1953	Undetermined
Jul 1953 – Jul 1955	Major General Rex Van Den Corput, Jr., USA
Aug 1955 – Nov 1956	Major General Francis Leroy Ankenbrandt, USAF
Nov 1956 – Oct 1957	Rear Admiral Joseph N. Wenger, USN
Nov 1957 – Aug 1958	Rear Admiral William D. Irvin, USN
Aug 1958 – Jun 1961	Major General James Dreyfus, USA
Jul 1961 – Jun 1963	Brigadier General John A. McDavid, USAF
Jun 1963 – Jun 1966	Rear Admiral Theodore A. Torgerson, USN
Jun 1966 – Jun 1969	Major General Dayton W. Eddy, USA
Jul 1969 – Jul 1971	Major General Anthony T. Shtogren, USAF
Jul 1971 – Jun 1972	Rear Admiral Francis John Fitzpatrick, USN
Jun 1972 – May 1973	Rear Admiral Eugene Harrison Farrell, USN
Jun 1973 – Dec 1974	Major General Herbert Ardis Schulke Jr., USA
Jun 1975 – Feb 1976	Major General Robert E. Sadler, USAF
1976 – 1979	J-6 Disestablished and functions transferred to J-3/5
Jun 1979 – Jul 1982	Lieutenant General Hillman Dickinson, USA
Oct 1982 – Jul 1984	Lieutenant General Robert T. Herres, USAF
Aug 1984 – May 1987	Lieutenant General Clarence E. McKnight, Jr., USA
May 1987 – May 1989	Vice Admiral Jerry O. Tuttle, USN
May 1989 – May 1991	*Lieutenant General James S. Cassity, Jr., USAF*
May 1991 – Nov 1992	Vice Admiral Richard C. Macke, USN
Dec 1992 – Jul 1994	Lieutenant General Albert J. Edmonds, USAF
Oct 1994 – Oct 1996	Vice Admiral Arthur K. Cebrowski, USN
Oct 1996 – Oct 1998	Lieutenant General Douglas D. Buchholz, USA
Nov 1998 – Oct 2000	Lieutenant General John L. Woodward, Jr., USAF
Oct 2000 – Jul 2003	Lieutenant General Joseph K. Kellogg, Jr., USA
Aug 2003 – Jul 2006	Lieutenant General Gen Robert M. Shea, USMC
Jul 2006 – Jul 2009	Vice Admiral Nancy E. Brown, USN
Jul 2009 – Apr 2011	Lieutenant General Dennis L. Via, USA
Apr 2011 – Nov 2011	Lieutenant General Larry O. Spencer, USAF

Major General Harold M. McClelland, USAF
Sep 1949 — Aug 1951

General McClelland served as the first Director of J-6 (Director Communications-Electronics). He was born in Tiffin, Iowa, in 1893. He graduated from Kansas State Agricultural College with a Bachelor of Science degree in 1916. Commissioned Aug 18, 1917 he was promoted to first lieutenant at the same time. General McClelland was assigned successively to the Army Service schools at Fort Leavenworth, KS, and on Nov 19, 1918, he joined the 48th Infantry at Norfolk, VA.

Detailed to the Aviation Section of the Signal Corps, he earned his wings by attending ground school at the University of Texas, flying gunnery and advanced fighter courses at Rockwell Field and San Diego, Calif. In Dec 1918 at Garden City and Roosevelt fields, N.Y., he became commandant of training, commanding officer of the cadet detachment and assistant engineering officer at Love Field, Dallas, TX.

In Jul 1919, at London, England he was assistant aviation officer, Headquarters of the Provisional District of Great Britain. He also saw service in England with the US Army Liquidation Mission. In Jan 1921, he attended the Air Service Communications School at Fort Sill, OK, and remained as an instructor. In Feb 1922, he was assigned to the Signal Corps radio laboratory at Camp Alfred Vail, N.J., as Air Service representative and from Aug 1922 to Feb 1924, was officer in charge of the laboratory. In September 1924, with the 9th Observation Group, Mitchell Field, NY, he was postal signal officer and instructor in communications at summer training camps.

He left Mitchell Field Oct 1, 1927 to serve the next four years in the Training and Operations Division, Office of the Chief of Air Corps, at Washington, D.C. In 1931 he organized the 119th Bombardment Group, which he commanded until 1934. In 1934 when the Air Corps took over flying the air mail, General McClelland acted as Zone Communications Officer at Salt Lake City. Later he was Communications and Meteorological Officer for General H.H. Arnold's Alaskan flight, which shaped the trend of air communications. In October 1934, he commanded Rockwell Field and Rockwell Air Depot. In 1937 he became inspector for General Headquarters Staff School later for General Headquarters Air Force at Langley Field, Va. In Aug 1938, he was Chief of Aviation Branch, Operations and Training Division of the War Department General Staff, Washington, DC. In May 1941, he was Assistant Chief Of Staff for Operations and Training of the Special Army Observer Group in London, England, and upon entry of the United States in World War II he was Assistant Chief of Staff, Training and Operations, European Theatre.

During Jul 1942 To Mar 1943 he was Director of Technical Services, Headquarters Army Air Forces, Washington, DC. After serving the next several months as deputy assistant chief of Air Staff, operations, Headquarters Army Air Forces, he became the air communications officer in July 1943. On April 8, 1946, he became the commanding general of the Airways & Air Communications Service. Upon creation of the Military Air Transport Service, June 6, 1948, General McClelland was named Deputy Commander, Services. Services included Airways & Air Communications Service, Air Weather Service, Air Rescue Service, Flight Service and National Interest Bases. In addition to his new duties, he continued as commanding general of Airways & Air Communications Service until Sept. 10, 1948. On Aug. 30, 1949, he was appointed Director of Communications-Electronics in the Department of Defense, with station at Washington, D.C.

He has been awarded the Distinguished Service Medal, the Legion of Merit, and is a Commander, Order of the British Empire.

Major General Rex Van Den Corput, Jr., USA
Jul 1953 — Jul 1955

General Corput served as the second Director of J-6 (Director Communications-Electronics). During his 35-year military career, Major General Rex Van Den Corput, Jr., served as Director of the Signal Corps Laboratories (1941-1944), Chief Signal Officer of the European Command (1952-1953) and Chairman of the Joint Communications-Electronic Committee.

As a Colonel, Rex Van Den Corput, Jr. (1900-1960) joined the first American troops to enter Japan with the Army's advance echelon. General Corput arrived at Fort Monmouth in 1929. He held varied assignments there, to include Director of the Signal Corps Laboratories. He left Fort Monmouth in April 1944 and became Signal Officer, Eighth Army, Asiatic Pacific Theater of Operations. The 1945 Fort Monmouth post newspapers recounts how, Colonel Corput flew from Leyte to Okinawa with a small party from Eight Army Headquarters. The group waited there during surrender negotiations. They then traveled to Japan in late August to lead the Army of Occupation, making Colonel Corput one of the first Americans to land on Japanese soil.

Colonel Corput went on to earn two stars and serve in the Office of the Chief Signal Officer; as Chief Signal Officer, EUCOM, Signal Division, 7890th Headquarters Group, Germany; and as Chairman, Joint Communications- Electronics Committee. He retired in 1955.

A September 20, 1960 ceremony at Ft Monmouth dedicated in Major General Corput's honor "the grounds bordered in the west by Pearl Harbor Road, on the north by Corregidor Road, forming a quadrant facing the front of Building 2700," the Myer Center. Corput Plaza was renamed Constitution Plaza in 1987 due to Army emphasis on the 200th anniversary of the constitutional convention.

Major General Francis Leroy Ankenbrandt, USAF
Aug 1955 — Nov 1956

General Ankenbrandt served as the third Director of J-6. He was born in Chicago, Illinois, in 1904. He graduated from the US. Military Academy June 12, 1926, and was commissioned a Second Lieutenant of Signal Corps. The following year he was a student at the Sheffield Scientific School, Yale University, where he received a Master of Science Degree in 1927.

Reporting to Fort Monmouth, NJ, in Jun 1927, General Ankenbrandt was personnel adjutant of the Civilian Military Training Camp and later became company commander in the 51st Signal Battalion. Beginning the company officers' course at the Signal School there in September 1928, he graduated a year later. He was then assigned at the US Military Academy as an instructor in the Department of Chemistry and Electricity.

Going to Schofield Barracks, HI, in August 1934, General Ankenbrandt served in various capacities for two years, and then became assistant chief of the Air Navigation Unit of the Aircraft Radio Laboratory at Wright Field, OH. He went to Langley Field, VA, in July 1940 as signal officer at General Headquarters Air Force and Air Force Combat Command, with additional duty as commanding officer of the 303rd Signal Company, later moving to Bolling Field, Washington D.C., with the organization, and in March 1942 he was assigned to Air Corps Headquarters.

In July 1942 General Akenbrandt was appointed theater signal officer for US Army Forces in the South Pacific, with station at New Caledonia. Two years later he returned to Hawaii as director of communications for the Air Forces in the Pacific Ocean Area, moving to Guam in that capacity in January 1945. That August he was appointed air communications officer of the US Strategic Air Forces at Guam.

Transferred to Air Corps headquarters in that capacity in October 1945, in December 1947 General Ankenbrandt was designated Chief of the Air Communications Group in the Office of the Deputy Chief of Staff for Operations, becoming Director of Communications the following February. Ordered to France in Sep 1951, he was assistant chief of staff for communications of the Allied Air Forces in Central Europe, Supreme Headquarters, Allied Powers in Europe, becoming Chief of Communications, Supreme Headquarters Allied Powers Europe in Oct 1952.

Joining the Military Air Transport Service September 1, 1954, General Ankenbrandt assumed command of the Airways and Air Communications Service at Andrews Air Force Base, MD. The following August 1, he was named director of communications-electronics, the Joint Staff, in the Office of the Joint Chiefs of Staff, Washington, D.C.

General Ankenbrandt's awards include: The Distinguished Service Medal and Bronze Star.

Rear Admiral Joseph N. Wenger, USN
Nov 1956 — Oct 1957

Admiral Wenger served as the fourth Director J-6. Rear Admiral Joseph Numa Wenger was born in Patterson, Louisiana on Jun 7 1901. In 1919 he was appointed to the US Naval Academy and graduated and commissioned on June 8, 1923. Admiral Wenger was briefly assigned to the Bureau of Ordnance, Navy Department and joined the USS Arkansas in September. In 1925 he was the communications watch Officer on the staff of commander Battleship Divisions, Battle Fleet. In the years 1926 to 1929 Admiral Wenger served on the cruisers Pittsburgh and Milwaukee. In 1931 he was assigned to the Bureau of Engineering, Navy Department. He had shore duty in May/June 1932 at the US Embassies, London, Paris, Berlin and Zurich.

Admiral Wenger rotated between sea duty and OP-20-G, the Navy's cryptologic element. As a radio intelligence officer for the Asiatic Fleet from 1932 to 1934, his reports on Japanese Imperial Fleet maneuvers demonstrated the importance of traffic analysis. Later, he helped create OP-20-G's Pacific Ocean collection network, and also played an important role in launching the Navy's effort in machine processing. Admiral Wenger served aboard the USS Sirius, USS Antares, USS Honolulu and Commanded the USS Tillman.

In July 1941 Admiral Wenger reported for duty in the office of Naval Communications, Navy Department, and remained there throughout WWII until July 1949. During the latter part of this period he served as Deputy Director of Naval Communications. After Pearl Harbor, Rear Admiral Wenger assisted in designing the reorganization of the Navy's COMINT structure, changing OP-20-G from decentralized to centralized operations. After World War II ended, he served as Deputy Director for COMINT at the Armed Forces Security Agency, and in 1952 became Vice Director of the National Security Agency (NSA). In August 1953 he became Director, Communications-Electronics, US European Command. In 1953, Rear Admiral Wenger received the National Security Medal from President Eisenhower for his planning and organizational work in communications research. In Oct 1956 he was the Deputy Director and then Chairman Joint Communications-Electronics Committee, of the Joint Chiefs of Staff. In May of 1957 he was also designated Chairman and US member of the Communications-Electronics Board, Standing Group, NATO. After his retirement from the Navy in 1958, he continued to serve as a member of NSA's Scientific Advisory Board.

Rear Admiral Wenger played a leading role in developing both the Naval Security Group Command and the National Security Agency, and was one of the most influential figures in American cryptologic history. He was a pioneer in development of machines for use in cryptanalysis, and was among the first to recognize the need for centralization within the Naval Communications Intelligence establishment. More than anyone else, he was responsible for establishing a Navy-wide cryptologic organization.

Admiral Wenger's awards include: The Distinguished Service Medal, National Security Medal and the Navy Unit Commendation Medal. He was also awarded the Order of the British Empire (Honorary Commander) by Great Britain. On 7 July 1976 the Rear Admiral Joseph N. Wenger Naval Cryptologic Museum was dedicated in Washington, DC (later moved to Pensacola Naval Station, FL).

Rear Admiral William D. Irvin, USN
Nov 1957 — Aug 1958

Admiral Irvin served as the fifth Director of J-6. Admiral William Davis Irvin was born on June 4, 1905, in Mt. Carmel, PA. He attended Mt. Carmel High School and the Werntz Preparatory School, Annapolis, Maryland, before his appointment in July 1923 to the US Naval Academy, from the Sixteenth Congressional District of his native state. Admiral Irvin graduated from the Naval Academy in 1927. Following graduation from the Naval Academy, he served from Aug 1927 until Jan 1928 in the destroyer tender Dobbin. After Joining the Asiatic Fleet, he served on the USS Trenton, USS Pittsburgh, USS Houston, and USS Southard.

In 1932 attended submarine school and then reported to S-48, in which Lieutenant H.G. Rickover was XO. He served in various submarines in late 1930s and early 1940s (USS Narwhal, USS Spearfish, USS S-29); commanded USS Nautilus during three war patrols in middle of World War II. The USS Nautilus provided photo reconnaissance of beaches of Tarawa, Apamama, and Makin before invasions. Admiral Irvin later commanded Submarine Squadron Two; was the Commanding Officer of Service School Command at Great Lakes; attended Naval War College; and served on SubPac staff; liaison between CinCNELM and Commanding General US Forces Austria. He commanded command ships Adirondack and Northampton.

He was Director of the Surface Type warfare Division, Office of the Chief of Naval Operations, from October until January 1957, after which he was in command of Cruiser Division TWO. In Nov 1957 he assumed duty as Deputy Director for Communications-Electronics, Joint Staff, Joint Chiefs of Staff.

The Defense Communications Agency (DCA) was established on May 12, 1960, with the primary mission of operational control and management of the Defense Communications System (DCS). Rear Admiral William D. Irvin became the first Director DCA. While Commander Service Force Pacific Fleet he initiated automatic data processing and was involved in planning for Naval Support Activity Danang. From 1965 to 1967, Admiral Irvin commanded Pacific Area of Military Sea Transportation Service.

Admiral Irvin's awards include: The Navy Cross, the Distinguished Service Medal, the Legion of Merit with two Gold Stars and Combat "V," and the Bronze Star Medal with Combat "V."

Major General James Dreyfus, USA
Aug 1958 — Jun 1961

General Dreyfus served as the sixth Director of J-6. MG Dreyfus was born in New York, New York, on 27 May 1904. He attended elementary and high school in New York, and studied electrical engineering at the Brooklyn Polytechnic Institute. He was employed by the New York Telephone Company from1923 until he was ordered to active duty in the Army in Sep 1940. During his years of Bell System service he maintained continuous membership in the New York National Guard rising to the rank of Captain.

During World War II, General Dreyfus served in units of the Eastern Defense Command. On release from active duty in 1945, he returned to his civilian occupation of Senior Engineer with the New York Telephone Company. On Jul 12, 1946, General Dreyfus returned to active duty as a regular Army Major. He attended the Advanced Signal Officer's Course and from there went to Eighth Army Headquarters in Tokyo, Japan, were he was assigned as Deputy Communications Officer, Signal Selection, to re-establish the Japanese Commercial Long Lines System and operate the telephone and telegraph system in the Tokyo area.

In Feb 1950 he was assigned to Headquarters, Fifth Army in Chicago as Assistant Signal Officer. From there he went to Headquarters Second Army at Fort George G. Meade, MD, as Signal Officer; and in Jul 1953, entered the Industrial College of the Armed Forces, graduating in June, 1954. After graduation, General Dreyfus joined the staff of the Chief Signal Officer, Washington, D. C., and on Aug 20, 1958, he became Director for Communications-Electronics, Joint Staff, Joint Chiefs of Staff.

During the 1950's, he was advisor to the Secretary of Defense, chairman of the Military Communications -Electronics board, and US Representative to the NATO Communications-Electronics Board (chairman when meeting in Washington).

He retired with 20 years active military duty on 30 June 1961 and rejoined the American Telephone and Telegraph Company as an Executive Assistant to the Vice President-Defense. In that position, General Dreyfus concentrated on new and improved communications services which are required by the increasing complexities of defense operations and administration.

Brigadier General John A. McDavid, USAF
Jul 1961 — Jun 1963

General McDavid served as the seventh Director of J-6. He was born in Decatur, IL, in 1916. He attended public schools and James Millikin University in Decatur, and the University of Illinois in Urbana before receiving an appointment to the US Military Academy.

He graduated from West Point in 1939 and was commissioned in the Signal Corps, US Army. His first assignment was with Company B, 51st Signal Battalion, at Fort Monmouth, NJ. After assignments at Fort Sheridan, IL, and Fort McPherson, AL, he went to Hawaii in 1940 and for nearly a year commanded the 324th Signal Company and a training school for signal specialties.

In January 1942 he was named assistant signal officer, Hawaiian Air Force, and in February 1943, became head of the Signal and Communications Section of the Seventh Air Force (redesignated from the Hawaiian Air Force). While with the Seventh Air Force he directed communications activities in the Caroline Islands, the Marshall Islands in the Mariannas and in the Ryukyu Islands. General McDavid returned to the United States in October 1945 for duty as director of operations, US Air Force Communications Unit Training Center, Camp Pinedale, CA. In 1946 he was named assistant air communications officer of the Joint Task Force for the atomic testing at Bikini (Operation Crossroads).

He returned from Bikini in September 1946 to Fifteenth Air Force headquarters at Colorado Springs, CO, as assistant chief of staff for communications. Beginning in August 1947, he attended Air Command and Staff School, Maxwell Air Force Base, AL, for a year, and under a special Air Force educational program, attended graduate school at the University of Illinois. He received a master's degree in Electrical Engineering from Illinois in February 1950.

He was then assigned to Keesler Air Force Base, MS, as commander of the training group operating the US Air Force Electronics Training Center. In August 1953 he went to the Air War College, Maxwell Air Force Base, AL. After completing studies at Maxwell in July 1954, he was named director of communications-electronics, Headquarters Northeast Air Command, Pepperell Air Force Base, St. Johns, Newfoundland. He was assigned as chief of communications and electronics for Strategic Air Command in May 1957.

General McDavid's awards include: The Legion of Merit, Bronze Star and the Commendation Ribbon with cluster.

Rear Admiral Theodore A. Torgerson USN
Jun 1963 — Jun 1966

Admiral Torgerson served as the eighth Director of J-6. He was born in Clarkfield, MN., attended St. Olaf College for two years and then taught in a one-room school in Red Lake County, MN., for two years. He entered the US Naval Academy in 1927 and graduated in 1931.

Admiral Torgerson served 35 years in the Navy. His assignments included service as Assistant Chief of Staff for Communications of the US European Command in Paris, duty as the Navy liaison to Congress and Command of USS Waldron (DD 699) 1945 - 1946, USS Soley (DD 707) 1946 - 1947, USS Skagit (AKA 105) 1953 - 1955 and USS Toledo (CA 133).

During the 1930s, he served at sea in the Atlantic and Pacific, studied applied communications at the Naval Academy Postgraduate School. He served as a gunnery officer aboard the battleship USS Tennessee until 1933 and then switched to destroyers in the Atlantic and Pacific oceans. He returned to Annapolis in 1937 to attend the Naval Postgraduate School, studying applied communications. During this time, he also acted as assistant coach of the Navy football team.

With the coming of World War II in 1939, he served in staff positions with the Atlantic Fleet on neutrality and war patrols as well as serving in protective convoy duty on the famed Murmansk run. In 1942, he became flag secretary to the superintendent of the Naval Academy and later that year met England's King George VI aboard the battleship USS Washington at Scapa Flow, off northern Scotland. From 1943 to 1945, he served on the staff of Pacific Fleet Commander Chester W. Nimitz, helping to develop plans to invade Japan. From 1945 to 1946, he commanded the destroyers USS Waldron and USS Soley in the Atlantic until he was sent to Italy and England, where he held several staff positions, including assistant chief of staff for communications for the 2nd Fleet.

In 1953, he commanded the attack cargo ship USS Skagit, which evacuated Vietnamese civilians from *Hanoi to Saigon after the defeat of the French at Dien Bien Phu in 1954. A year later, he assumed* command of the heavy cruiser USS Toledo.

In 1956, he left the sea and returned to Washington to serve as Navy Liaison to Congress. He joined the Joint Chiefs of Staff in 1958 and was promoted to rear admiral in 1960. He retired from the Pentagon in 1966, where he had become director of communications for the Joint Chiefs of Staff.

Major General Dayton W. Eddy, USA
Jun 1966 — Jun 1969

General Eddy served as the ninth Director of J-6. He was born on 15 Jul 1915 in Vineyard Haven, MA. In 1937, he graduated from the University of Vermont, where he majored in electrical engineering. He was commissioned as a Second Lieutenant of Infantry in the Army Reserves through the Reserve Officer Training Corps.

In 1940, he was called to active duty. When the Japanese attacked Pearl Harbor, Hawaii, on Dec 7, 1941, he was aboard a troop transport bound for the Philippines. The ship was ordered to Australia instead. Because of his background in electrical engineering, he was detailed to the Signal Corps. During the next three years, he had assignments in Australia, Java and New Guinea. In 1944, he commanded a signal battalion that set up communications for the headquarters of General of the Army Douglas MacArthur during the liberation of the Philippines. In 1946, General Eddy was ordered to Washington. He spent the next five years in the Office of the Chief Signal Officer of the Army.

From 1963 to 1966, he was Deputy Commanding General of the Army Security Agency, and from 1966 to 1969, he was director of communications-electronics on the Joint Staff Organization of the Joint Chiefs of Staff. He retired later that year after a brief period as deputy chief of reserve components on the Army staff.

In 1964, he received a Master's Degree in Business Administration from George Washington University. He was a graduate of the Industrial College of the Armed Forces in Washington and the Armed Forces Staff College in Norfolk.

He was recalled to active duty from retirement for several months in 1971. He began a career with the Maryland General Services Department in 1972. He retired a second time in 1981.

General Eddy's military decorations include: Two awards of the Legion of Merit, the Bronze Star and the Army Commendation Medal.

Major General Anthony T. Shtogren, USAF
Jul 1969 — Jul 1971

General Shtogren served as the tenth Director of J-6. He was born in 1917, in Boston, MA. He graduated magna cum laude from Boston College in 1939 with a BS degree in chemistry and received his MS degree in chemistry summa cum laude from the College of the Holy Cross, Worcester, MA., in 1940.

He began his military career in the fall of 1940 as an aviation cadet and was commissioned in 1941. During 1940-1941 he did graduate work in meteorology at the Massachusetts Institute of Technology.

From 1942 to 1945 he served as a Weather Officer at Turner Field, GA, and with the 2d Air Division in the European Theater of Operations. Returning to the United States in May 1945, he attended advanced meteorological school at Chanute Field, IL, and was then assigned to Langley Field, VA, where he served as director of Personnel and Administration, Headquarters Air Weather Service, from Jan to Sep 1946. He was awarded a Master of Business Administration degree in Jul 1948 from Columbia University.

At Headquarters Air Weather Service, Washington, D.C., he served as Assistant Chief of Staff and later Deputy Chief of Staff, Personnel. In Aug 1951 when he became commander of the 2d Weather Group at Langley AFB, VA.

From Sep 1954 until Aug 1957 he was assigned to Tokyo, Japan, as Deputy Commander and later Commander of the 1st Weather Wing. Under his command, the Wing was awarded the Air Force Outstanding Unit Award for its service, particularly in locating and tracking typhoons to gather vital data.

In Sep 1957 he commanded the 3rd Weather Wing, Offutt Air Force Base, NE. He also served as Staff Weather Officer to the Commander in Chief of the Strategic Air Command.

In Jul 1963 General Shtogren assumed command of the Eastern Communications Region, Air Force Communications Service, at Westover AFB, MA. In June 1965 he was named commander of the Pacific Communications Area at Wheeler AFB, HI, and from Aug 1966 to May 1968 he also served as deputy chief of staff, communications-electronics, Headquarters Pacific Air Forces. He became Deputy Director J-6 (communications-electronics), Organization of the Joint Chiefs of Staff, in Jul 1968.

General Shtogren's awards include: The Distinguished Service Medal, Legion of Merit w/oak leaf cluster, Army Commendation Ribbon, Distinguished Unit Citation Emblem, Air Force Outstanding Unit Award Ribbon w/oak leaf cluster and the Croix de Guerre w/palm (France).

Rear Admiral Francis John Fitzpatrick, USN
Jul 1971 — Jun 1972

Admiral Fitzpatrick served as the eleventh Director of J-6. He was born in Salt Lake City, UT, on Feb 3, 1916. He attended Regis High School, Denver, CO; Kemmerer (Wyoming) High School; and the University of Wyoming at Laramie, prior to entering the US Naval Academy. He graduated and was commissioned on Jun 1, 1939.

In 1939, he joined the USS NEW MEXICO (BB-40) and was serving in that battleship when the United States entered World War II, Dec 8, 1941. In July 1943 he reported for instruction in naval communications at the Naval Postgraduate School, Annapolis, Maryland. He next served as Communication Officer on board the USS ALABAMA (BB-60), which operated as part of the THIRD and FIFTH Fleets from the seizure of the Admiralty Islands to the strikes on the Japanese homeland, preceding the cessation of hostilities in Aug 1945. From Nov of that year until Apr 1946 he was Aide and Flag Secretary on the Staff of Commander Battleship Division THREE, after which he had duty as Navigator and Operations Officer on board the USS OAKLAND (CLAA-95).

From Nov 1947 to Dec 1950 he was an instructor and Officer in Charge of the Indoctrination School US Naval Postgraduate School, Monterey, CA. In Nov 1951 he assumed command of the USS ARNOLD J. ISBELL (DD-869). In Aug 1953, he next served as Executive Officer and Assistant Communications Officer of the US Naval Communication Station, San Diego, CA. He remained there until Dec 1955, and the next month reported as Executive Officer of the USS COLUMBUS (CA-74). In Aug 1957 he attended the Industrial College of the Armed Forces, Washington, D.C., and upon completion of the course there in Jul 1958, was assigned to the Office of the Chief of Naval Operation Navy Department, Washington, D.C., where he had duty as Assistant for Joint Chiefs of Staff Matters and in the Logistic Plans Division until Jul 1960. He then became Professor of Naval Science and Commanding Officer of the Naval Reserve Officers Training Corps Unit at the University of Utah at Salt Lake City.

In Jul 1961 he assumed command of the USS MAGOFFIN (APA-199) and in Oct 1962 was detached to serve as Chief of the Plans, Programs and Reporting Division, Command Satellite Project Office, Defense Communications Agency, Washington, D.C. While in that assignment, he attended George Washington University, from which he received an MS in Business Administration in 1964.

He assumed command of the USS WRIGHT (CG-2) in Dec 1964 and in Dec 1965 he returned to the Office of the Chief of Naval Operations, serving as Special Assistant for Communication Projects to the Assistant Chief of Naval Operations (Communications)/Director of Naval Communications until June 1966, when he became Deputy Director, J-6 (Communications-Electronics), Joint Chief of Staff. In Jul 1968 he became Assistant Chief of Naval Operations (Communications and Cryptology) and Commander Naval Communications Command, Naval Communications Headquarters, Bailey's Crossroads, VA. In Jul 1971 he reported as Director J-6 (Communications-Electronics), The Joint Staff Office, Joint Chiefs of Staff, Washington, D.C.

Admiral Fitzpatrick's awards include: The Distinguished Service Medal, Legion of Merit with Gold Star and the Bronze Star Medal with Combat "V."

Rear Admiral Eugene Harrison Farrell, USN
Jun 1972 — May 1973

Admiral Farrell served as the twelfth Director of J-6. Born in Meridian, Texas, on Apr 17, 1918 he attended Tarpon Springs, Florida, High School. Enlisted in the Navy on Oct 14, 1936 he served on the USS NEVADA.

After discharge, he entered the US Naval Academy and was commissioned on Dec 19, 1941. Assigned to the USS IDAHO until April 1945 he participated in numerous operations in the Pacific. In 1946 he was Executive Officer and Navigator aboard the USS FISKE (DD-842). He next served consecutively as Aide and Flag Secretary to Commander Cruiser Division THREE.

In Sep 1949 he was an Instructor at the Naval Academy. In Aug 1952, reported to the Navy Department, Washington, D. C., for duty in the Office of the Chief of Naval Operations. From Jul1953 to Aug 1955 was a member of the Joint US Military Group and Military Assistance Advisory Group, Spain.

In Nov 1955 he assumed command of the USS HUNT (DD-674). Detached from command of that destroyer in August 1957, he attended the Naval War College, Newport. From Jul 1958 to Jul 1960 was Executive Secretary of the Communications Electronics Directorate (J-6), Joint Chiefs of Staff, Washington, D. C. He next served as Assistant Chief of Staff for Military Assistance and Naval Mission Matters to Commander US Naval Forces, Caribbean and Commandant Fifteenth Naval District, with headquarters in Fort Amador, Canal Zone. In Sep 1962 he Commanded Destroyer Division ONE HUNDRED THIRTY-TWO and from Apr to Sep 1963 commanded Destroyer Division TWO HUNDRED THIRTY-TWO. In Oct 1963 was the Director of the Communications Programs Division (OP-94), Office of the Chief of Naval Operations, Navy Department, Washington, D. C. While there he had further duty as DNC Member Military Construction Review Board; Op-94 Member, Ship Characteristics Board; and Op-94 Member, Sea Hawk Steering Group. In Sep1964 he was assigned as Assistant Chief Staff for Communications on the Staff of the Commander in Chief, US Pacific Fleet. He assumed command of the USS NORTHHAMPTON (CC-1) in Oct 1966 and in May 1968 was assigned to the Office of the Assistant Chief of Naval Operations (Communications and Cryptology), where he served as Executive Assistant for Communications. In Jul 1969 he became Deputy Assistant Chief of Naval Operations (Communications and Cryptology). In Dec 1970 he became Commander of the Naval Officer Candidate School, Newport, Rhode Island, and commander of the Naval Schools Command.

In Jun 1971 was assigned as Deputy Director of the Defense Communications Agency for Operations, Washington, DC. In Jun 1972 he was Director J-6 (Communication-Electronics), The Joint Staff, and in Feb 1973 was designated Director of Communications-Electronics at US European Command.

Admiral Farrell's awards include: The Legion of Merit with Gold Star, the Meritorious Service Medal, the Navy Commendation Medal and Air Force Commendation Ribbon.

Major General Herbert Ardis Schulke Jr., USA
Jun 1973 — Dec 1974

General Schulke served as the thirteenth Director of J-6. He was born 12 Nov 1923 in New Ulm, Minnesota. He is a graduate of the United States Military Academy, the Armed Forces Staff College and the Industrial College of the Armed Forces. He received his PhD Degree in Electrical Engineering from the University of Illinois.

Assignment Overview:

- Jan 64 to Feb 65 – Communications-Electronics Staff Advisor to Chief, later Project Officer, Office of the Secretary of Defense/ Advanced Research Projects Agency, Research and Development Field Unit Washington D.C. with station Saigon, Vietnam.
- Feb 65 to Jul 65 – Staff Officer, Director of Defense Research and Engineering, Office, Secretary of Defense, Washington D.C.
- Jun 66 to Jun 69 – Principal Military Assistant to Director, Tactical Systems Review and Analysis, Tactical Warfare Programs, later Military Assistant to Deputy Director (Tactical Warfare Programs), Office, Director of Defense Research and Engineering, Office, Secretary of Defense, Washington D.C.
- Jun 69 to Jan 70 – Commanding Officer, 29th Signal Group, United States Army Strategic Communications Command, Thailand.
- Jan 70 to Sep 71 – Deputy Director for Operations, Defense Communications Agency, Washington, D.C.
- Sep 71 to Jun 73 – Deputy Director for Plans, Defense Communications Agency, Washington, D.C.

Major General Schulke's awards include: The Legion of Merit (w/Oak Leaf Cluster), Bronze Star Medal and the Army Commendation Medal (with 2 oak Leaf Clusters).

Major General Robert. E. Sadler, USAF
Jun 1975 — Feb 1976

General Sadler served as the fourteenth Director of J-6. He was born in 1925 in Eagle Grove, IA, and graduated from Clinton HS, Clinton, IA, in 1942, and joined the Enlisted Reserve Corps in 1943. In Sep of that year, General Sadler entered active service as an aviation cadet and was commissioned as a Second Lieutenant upon graduation from navigator training at Hondo Army Air Field, TX, in February 1945. After attending radar school at Victorville, CA, General Sadler was assigned to operational flying units with B-29 aircraft at Alamogordo, Clovis and Roswell, NM.

He graduated from the aircraft observer/bombardier school at Mather Field, CA, in Oct 1947 and subsequently served as Executive Officer for the Director of Training. From Dec 1948 to Sep 1950 and from Jul 1951 to Aug 1955, General Sadler served in a variety of positions as an Editor and Editorial Director of Air Force Training Publications pertaining to flying and flying training. Between Sep 1950 and Jul 1951, he was the wing navigator for the B-29 combat crew school at Randolph AFB, TX.

In Aug 1955, General Sadler attended the Royal Canadian Air Force Specialist Navigation School at Winnipeg. Jul 1956 he was assigned to the US Air Force Academy as Chief of Advanced Flying Training. He entered the University of Colorado and graduated in 1961 with a BS degree in electrical engineering. In Jul of 1961, General Sadler was transferred to Scott AFB, IL., for duty with the Air Force Communications Service. He served first as Chief of Equipment Engineering and later as an advanced plans action officer. He was involved with communications satellite planning and performed temporary duty as the communications plans officer for Task Group 8.4, the Air Force element of the DOMINIC series of nuclear testing. General Sadler also served as Chief of Test and Evaluation. A graduate of the Air War College in Jun 1967, he was assigned to the Directorate of Command Control and Communications, HQ US Air Force, Washington, D.C. General Sadler served as an action officer, Chief of the Program Management Branch, Deputy Chief and Chief of the Plans and Programs Division.

During 1970 - 1971, General Sadler was Deputy Commander of Southeast Asia Communications Region (mainland), Deputy Chief of Staff for Communications-Electronics for Seventh Air Force, and Commander, 1964th Communications Group at Tan Son Nhut Air Base Vietnam. In Jul 1971, he assumed command of AFCS' Northern Communications Area, at Griffiss AFB, NY. In Aug 1972, he became Director, Communications-Electronics (J-6) for US Readiness Command at MacDill AFB, FL. In Mar 1974 General Sadler became the Vice Commander of AFCS, at Richards-Gebaur AFB, MO. In Aug of 1974, General Sadler returned to Washington, D.C., for duty as Deputy Director of Command Control and Communications, Office of the Deputy Chief of Staff for Programs and Resources, HQ US Air Force. Ten months later, General Sadler was assigned to the Joint Staff, as the Director for Communications-Electronics (J-6). In Aug 1976 he was Deputy Director for Plans and Programs, Defense Communications Agency, Arlington, VA. General Sadler assumed command AFCS on Oct 31, 1977.

General Sadler's awards include: The Defense Superior Service Medal with oak leaf cluster, the Legion of Merit with two oak leaf clusters, the Meritorious Service Medal, and the Air Force Outstanding Unit Award with oak leaf cluster and valor device.

Lieutenant General Hillman Dickinson, USA
Jun 1979 — Jul 1982

General Dickinson served as the fifteenth Director of J-6. He was born in Independence, MO, in February 1926. He attended Massachusetts Institute of Technology and, in 1949, received his BS from the US Military Academy. His initial troop assignment was with the 14th Armored Cavalry in Germany, 1950-1953.

Assigned to the 10th Armored Cavalry Squadron of the 7th Division in Korea, he served as Executive Officer and Squadron Commander prior to returning to duty in Washington, DC, in the Office of the Secretary of Defense, Advanced Research Projects Agency.

In 1966-1967 he attended the Army War College before being assigned to Vietnam. There he commanded the 3d Squadron of the 11th Armored Cavalry Regiment (Blackhorse) from June 1967 through January 1968. In 1971 he returned to Vietnam as senior advisor to the 1st Vietnamese Infantry Division in the northern two provinces. His next post was Fort Knox where he served as Commander of the 1st Brigade conducting Armor AIT training until he was promoted to Brigadier General in June 1973. In 1974 he became Deputy Director of Combat Support Systems in the office of the Deputy Chief of Staff for Research, Development and Acquisition, Department of the Army.

In January 1977, he was promoted to Major General and assigned to head the Academic Committee of the West Point Study Group which reported to the Chief of Staff. On October 13, 1977, he became the first Commanding General of the US Army Communications Research and Development Command (Provisional) (CORADCOM).

In June 1979 he was promoted to Lieutenant General and assigned as Director for Command, Control, and Communications systems, Organization of the Joint Chiefs of Staff.

General Dickinson was a prolific author with more than twenty papers and articles published in such diverse fields as plasma physics, space weather forecasting, guerrilla warfare, sensor systems, training, military computers and command, control and communications.

LTG Dickenson's awards include: The Legion of Merit with three Oak Leaf Clusters, Bronze Star for Valor with Cluster, Meritorious Service Medal, Air Medal for Valor with nineteen Clusters.

Lieutenant General Robert T. Herres, USAF
Oct 1982 — Jul 1984

General Herres served as the sixteenth Director J-6. He was born in 1932, in Denver, Colorado where he attended East High School. He graduated from the US Naval Academy in 1954. He earned Master's Degrees in Electrical Engineering and Public Administration from the Air Force Institute of Technology and George Washington University, respectively. He completed Air Command and Staff College in 1965 and the Industrial College of the Armed Forces in 1971.

After pilot training, the general's early assignments were in fighter-interceptors, first as a pilot and then as an air electronics maintenance officer. Upon graduation from the Air Force Institute of Technology in 1960 he transferred to Europe, where he served as a technical intelligence analyst and, later, as a flying training supervisor.

Upon completion of Air Command and Staff College in 1965, General Herres joined the Air University staff to instruct in weapons employment planning until entering training at the Aerospace Research Pilot School at Edwards AFB, CA.

In August 1967 General Herres was assigned to the Manned Orbiting Laboratory program at the Space Systems Division of Air Force Systems Command in Los Angeles as a crewmember and chief of the Flight Crew Division. After program cancellation in 1969, he returned to the Flight Test Center at Edwards AFB, where he served as deputy chief of staff for plans and requirements. He left Edwards in August 1970 to attend the Industrial College of the Armed Forces.

He was vice commander of the 449th Bombardment Wing at Kincheloe AFB, MI, in June 1971 and commander the following year. In April 1973 he was assigned to Southeast Asia for duty as Commander of the 310th Strategic Wing, U-Tapao Royal Thai Naval Airfield, Thailand. He returned to Kincheloe in September 1973 to resume command of the 449th Bombardment Wing.

From March 1974 to June 1979 General Herres served in various aspects of the command and control systems field at Headquarters Strategic Air Command, Electronic Systems Division of Air Force Systems Command and Headquarters US Air Force. In June 1979 General Herres became Commander of Air Force Communications Command at Scott AFB, IL; assumed command of SAC's 8th Air Force at Barksdale AFB, LA, in July 1981; and became the Director for Command, Control and Communications Systems, Organization of the Joint Chiefs of Staff, Washington, D.C., in October 1982. He was assigned to Peterson AFB, Colorado as commander in chief of the North American Aerospace Defense Command and Aerospace Defense Command, and commander of US Air Force Space Command in July 1984. He became the first commander in chief of US Space Command upon activation of the unified command in September 1985. He became the vice chairman, Joint Chiefs of Staff, Washington, D.C. in February 1987.

General Herres' awards include: The Defense Distinguished Service Medal, Distinguished Service Medal, Legion of Merit with oak leaf cluster, Bronze Star Medal, Meritorious Service Medal, Air Medal and Air Force Commendation Medal.

Lieutenant General Clarence E. McKnight, Jr., USA
Aug 1984 — May 1987

General Mcknight served as the seventeenth Director of J-6. He is a graduate of the United States Military Academy with a BS Degree in Engineering and holds an MS Degree in Electrical Engineering from the University of Michigan. He is a graduate of the Signal School, Basic and Advanced Courses, the United States Army Command and General Staff College, and the United States Army War College.

Assignment Overview:

- May 53 - Mar 54 Communications, Message Center, Telephone and Telegraph, and Wire Construction Officer, 45th Signal Company, 45th Infantry Division, United States Allied Forces, Far East

- Jul 54 - Mar 55 Commander, 510th Signal Company, Base Maintenance, Fort Monmouth, New Jersey

- Oct 56 - Apr 59 Communications Center, Telephone and Telegraph, Signal Officer and later Chief, Wire Branch, Signal Division, United States Army Signal Service Company, Kaiserslautern, Western Area Signal Service Command, United States Army Europe, Germany

- Jun 62 - Dec 62 Director, Electronic Data Processing Department, United States Army Electronics Research and Development Activity, White Sands Missile Range, NM

- Dec 62 - Oct 63 Signal Communications Planner, Operations and Training Branch, United States Military Supply Mission, India, New Delhi, India

- Oct 63 - Nov 64 S-3 and later Executive Officer, 121st Signal Battalion, 1st Infantry Div, Ft Riley, KS

- Nov 65 - May 67 Signal Advisor, United States Military Grp, El Salvador, San Salvador, El Salvador

- May 67 - Apr 69 Plans Officer, Plans Division, J-6, USSOUTHCOM, Quarry Heights, CZ

- Apr 69 - Jul 69 Commander, 9th Signal Battalion, 9th Infantry Division, Vietnam

- Jun 69 - May 70 Commander, 36th Signal Battalion, 2d Signal Group, 1st Signal Brigade, Vietnam

- Jun 70 - Jun 71 Commander, 123d Signal Battalion, 3d Infantry Division, United States Army Europ

- Jul 72 - May 73 Chief, Program Management Office, United States Army Communications-Electronics Engineering Agency, Fort Huachuca, AZ

- Jun 73 - Jul 74 Commander, 22d Signal Grp, United States Army Communications Command Europe

- Jul 74 - Jan 75 Commander, 2d Signal Group, 5th Signal Command, United States Army Europe

- Jan 75 - Jun 75 Chief of Staff, 5th Signal Command, United States Army Europe

- Jul 75 - Jun 77 Chief of Staff, United States Army Communications Command, Fort Huachuca, AZ

- Dec 78 - Sep 80 Commanding General, 5th Signal Command/Deputy Chief of Staff Communications -Electronics, United States Army Europe and Seventh Army

- Sep 80 - Jun 82 Commanding General, United States Army Signal Center/Commandant, United States Army Signal School, Fort Gordon, GA

- Jun 82 - Jul 84 CG, United States Army Information Systems Command, Fort Huachuca, AZ

- Jul 84 - Jun 87 Director, Command, Control and Communications Systems/Director, Joint Strategic Connectivity Staff, Organization of the Joint Chiefs of Staff, Washington, D.C.

Vice Admiral Jerry O. Tuttle, USN
May 1987 — May 1989

Admiral Tuttle served as the eighteenth Director of J-6. He rose from seaman recruit to Vice Admiral. VADM Tuttle received a Communications Engineering Degree from the Naval Postgraduate School in 1962 having attended the undergraduate and postgraduate schools simultaneously. He graduated with honors from the Naval War College, concurrently receiving a master's degree in International Relations from George Washington University in 1969.

VADM Tuttle was assigned to numerous attack and fighter squadrons. He served as Aide and Flag Lieutenant to the Commander in Chief, US Pacific Fleet. He commanded an attack squadron, an air wing, a replenishment ship, the aircraft carrier USS JOHN F. KENNEDY, and two Battle Groups/Forces. He served as Special Assistant to the Chief of Naval Operations and as Deputy Director for Intelligence, Defense Intelligence Agency. He flew over 220 combat missions over North Vietnam and has more than 1,025 carrier arrested landings. At the time of his retirement, he was Navy's "Grey Eagle" signifying the earliest designated Naval Aviator on active duty.

VADM Tuttle created Navy's C4I Joint Operations Tactical System (JOTS). From 1985 to 1987, he was Deputy and Chief of Staff for the Commander in Chief, US Atlantic Fleet, following a tour as Naval Inspector General. From May 1987 to May 1989 he was Director, Command, Control and Communications (C3) Systems, The Joint Staff. In 1989, he became Director, Space and Electronic Warfare, an assignment he held until retirement. During this tour he crafted Navy's C4I architecture, Copernicus, and Information Warfare architecture, Sonata. He has served as a member of the Defense Science Board, a member on the Board of Directors for the USO-Metro, a Chairperson of the Board of Advisors to the Superintendent of the Naval Postgraduate School, a member of the Board of Advisors to the Georgia Tech Research Institute, a member of the Navy-Marine Corps Relief Society, and an Advisory Board Member to the Software Engineering Institute. He is a Navy Aviator Gold Eagle.

VADM Tuttle's awards include: The Defense Distinguished Service Medal (3); Defense Superior Service Medal; Legion of Merit (4); Distinguished Flying Cross (3); Meritorious Service Medal (2); Air Medal (23); Navy Commendation Medal (4); Letter of Commendation from the Japan Defense Agency; and numerous campaign awards.

Lieutenant General James S. Cassity, Jr., USAF
23 May 1989 — 24 May 1991

General Cassity served as the nineteenth Director of J-6. He was born in 1935 and considers Gary, TX, his hometown. He is a 1958 graduate of Texas A&M University and received a Master of Science degree in systems management from the University of Southern California in 1969. He is a graduate of Defense Systems Management College, the Air War College and has completed Harvard Business School's advanced management program.

General Cassity was commissioned through ROTC in 1958 and earned his pilot wings at Laredo AFB, TX. He is a command pilot with more than 4,500 flying hours, including 180 combat hours in helicopters. General Cassity's operational assignments include flying H-21 helicopters in 1961 and 1962 in support of missile testing at Hurlburt Field, FL, and two years in airborne early warning at Otis AFB, MA, as an EC-121 pilot and aircraft commander.

In 1964 he was assigned to Air Force Special Operations, spending three years in South America flying C-46 transports with the 605th Air Commando Squadron at Howard AFB, Canal Zone, and one year in Southeast Asia flying CH-3s with the 20th and 21st Helicopter squadrons, returning in 1968.

General Cassity was assigned to the F-15 System Program Office, Aeronautical Systems Division, Wright-Patterson AFB, OH, in 1970, working in various management positions in the Configuration Management Directorate. From 1974 to 1978 he was assigned to Headquarters Electronic Systems Division, Hanscom AFB, MA., in the Office of the Deputy for Security Assistance Programs as director of business operation; then, later, as system program director for the Combat Grande Program, Office of the Deputy for Surveillance and Navigation. In 1979 he became assistant deputy chief of staff for engineering, programs and acquisition, Air Force Communications Command, Scott AFB, IL.

In July 1981 General Cassity was named commander of the Engineering Installation Center, Air Force Communications Command, Oklahoma City Air Force Station, OK. In August 1983 he was assigned as deputy chief of staff for information systems at Headquarters US Air Forces in Europe and commander of the European Information Systems Division, Ramstein Air Base, West Germany. Returning to the United States in July 1985, General Cassity served as commander, Space Information Systems Division, and deputy chief of staff, Communications Electronics and Computer Resources, Headquarters North American Aerospace Defense Command and US Air Force Space Command, Peterson AFB, CO. With the activation of US Space Command in September 1985, he became Director of Command and Control Systems and Logistics, and Deputy Chief of Staff for Systems Integration, Logistics and Support, Air Force Space Command, managing and directing the command's efforts in communications, computers, logistics and contracting. In Mar 1988 General Cassity assumed command of the Air Force Communications Command, headquartered at Scott Air Force Base, IL.

General Cassity's awards include: The Defense Distinguished Service Medal, Silver Star, Legion of Merit with two oak leaf clusters, Meritorious Service Medal with oak leaf cluster, Air Medal with two oak leaf clusters, Air Force Commendation Medal with two oak leaf clusters, Air Force Organizational Excellence Award with three oak leaf clusters, Armed Forces Expeditionary Service Medal and Vietnam Service Medal with three service stars.

Vice Admiral Richard C. Macke, USN
May 1991 — Nov 1992

Admiral Macke served as the twentieth Director of J-6. He was born in Freeport, IL. A 1956 graduate of Kirkland High School in Kirkland, IL, he graduated from the US Naval Academy in 1960. After graduation, he took flight training in Pensacola, Florida, and designated a Naval Aviator in August 1961. He then reported to VA-23 in Lemoore, California and flew A-4 Skyhawks from USS MIDWAY (CV-41).

In 1965, Admiral Macke entered the Navy Test Pilot School at Patuxent River, MD. Following graduation and designation as a test pilot, he served in the Weapons System Test Directorate of the Naval Air Test Center participating in the initial trials of the A-7A, Corsair II aircraft. He next went to VA-27, flying A-7.s and completed more than 150 combat missions in Southeast Asia from the USS CONSTELLATION (CV-64).

In February 1970 Admiral Macke graduated with distinction with a Master of Science degree in Operations Research and Systems Analysis from the US Naval Postgraduate School. In March 1971, he reported to VA-66 at Cecil Field, FL as Executive Officer and later as Commanding Officer of the A-7E squadron flying from the USS INDEPENDENCE (CV-62).

In January of 1975, he was assigned to the Navy Office of Legislative Affairs in the Pentagon, where he was involved in presenting the Naval Aviation Program budget to members of Congress and their staffs. Following completion of Nuclear Propulsion Training, Admiral Macke served as Executive Officer of USS NIMITZ (CVN-68) where he participated in the attempted rescue of American hostages in Iran. Completing that tour, he was selected for major ship command and commanded the USS CAMDEN (AOE-2), successfully completing a 14-month complex overhaul in San Francisco, CA. Admiral Macke served a short tour as the Executive Assistant to the Navy Director of Command and Control in the Pentagon prior to reporting to the USS DWIGHT D. EISENHOWER (CVN-69) as Commanding Officer in July of 1984. During his highly successful tour on IKE, the ship was awarded the Battle "E" as the most combat ready aircraft carrier on the East Coast of the United States.

Admiral Macke was selected for flag rank and upon leaving the IKE reported as the Commander of the Naval Space Command where he led initiatives to enhance space support to tactical warriors. Next, he reported as the Commander of Carrier Group TWO in March of 1988, where he completed a deployment to the Mediterranean and in January 1990 was selected for sequential command and became Commander Carrier Group FOUR. Admiral Macke was then nominated by President Bush to serve in the grade of Vice Admiral as the Director for Command, Control, Communications and Computer (C4) System (J-6). In December 1992, General Colin Powell chose Admiral Macke to serve as the Director of the Joint Staff.

Admiral Macke was nominated and confirmed for the four star grade of Admiral and left the Joint Staff to become the Commander in Chief, US Pacific Command in July 1994.

Admiral Macke's decorations and awards include: The Defense Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit, Meritorious Service Medal, fourteen Strike/Flight Air Medals, an individual Air Medal, Navy Commendation Medal and various service and campaign medals.

Lieutenant General Albert J. Edmonds, USAF
Dec 1992 — Jul 1994

General Edmonds Served as the twenty-first Director of J-6. He entered the Air Force in August 1964 and was commissioned upon graduation from Officer Training School, Lackland Air Force Base, TX, in November 1964. He has held many critical C4I positions, including Deputy Chief of Staff for Communications-Computer Systems, Tactical Air Command (dual-hatted as Commander, Air Force Communication Command's Tactical Communications Division); Assistant Chief of Staff, Systems for Command, Control, Communications and Computers, Air Force Headquarters; and Director for Command, Control, Communications and Computer Systems Directorate (J-6), the Joint Staff and Director of the Defense Information Systems Agency, and Manager, National Communications System, with headquarters in Arlington, VA. Lt Gen Edmonds holds a Bachelor's degree in chemistry from Morris Brown College, Atlanta, GA.; Master of Arts degree in Counseling Psychology, Hampton Institute, Hampton, VA. He is a distinguished graduate, Air War College, Maxwell Air Force Base, AL. and attended the National and International Security Program, John F. Kennedy School of Government, Harvard University, Cambridge, MA.

Assignment Overview:

- Dec 1971 - Dec 1972, Director, Emergency Mission Support, Pacific Comm Area, Hickam AFB, HI
- Dec1972 - May 1973, Chief of Ops, 2083rd Comm Sqd (Prov), Takhli Royal Thai Air Base, Thailand
- May 1973 - Jun 1975, Communications Systems Staff Officer, Directorate of Command, Control, and Communications, Headquarters US Air Force, Washington, D.C.
- Jul 1975 - Jul 1977, Chief, Commercial Comm Policy Office, Defense Comm Agency, Arlington, VA.
- Jul 1977 - Aug 1979, Director, Communications-Electronics, 3rd Air Division; Commander, 27th Communications Squadron, Andersen AFB, Guam
- Jun 1980 - Jun 1983, Chief, Joint Matters Group, Directorate of Command, Control and Telecommunications, Deputy Chief of Staff, Plans And Ops, Hq US Air Force, Washington, D.C.
- Jun 1983 - Jan 1985, Vice Commander, Tactical Comm Division; Assistant Deputy Chief of Staff For Communications And Electronics, Headquarters Tactical Air Command, Langley AFB, VA.
- Jan 1985 - Jul 1988, Commander, Tactical Communications Division, Deputy Chief of Staff for Communications-Computer Systems, Headquarters Tactical Air Command, Langley AFB, Va.
- Jul 1988 - May 1989, Director, C4 Systems Directorate, US Central Command, Macdill AFB, FL.
- May 1989 - Nov 1990, Asst Chief of Staff For C4, Headquarters US Air Force, Washington, D.C.
- Nov 1990 - Aug 1991, Assistant Deputy Chief of Staff for C4, Hq US Air Force, Washington, D.C.
- Sep 1991 - Jul 1994, Director, C4 Systems Directorate (J-6), The Joint Staff, Washington, D.C.
- July 1994 - Director, Defense Information Systems Agency And Manager, National Communications System, Arlington, VA.

Lt Gen Edmonds awards include: The Defense Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit, Meritorious Service Medal with three oak leaf clusters

Vice Admiral Arthur K. Cebrowski, USN
Oct 1994 — Oct 1996

Admiral Cebrowski served as the twenty-second Director of J-6. He was born in Passaic, NJ and was raised and schooled in Hasbrouck Heights, NJ. He graduated from Villanova University in 1964, received his Masters Degree in Computer Systems Management from the Naval Post Graduate School in 1972 and attended the Naval War College (Strategic Studies Group) in 1981.

He entered the Navy through the Naval Reserve Officers Training Corps in 1964 to be a Navy pilot. As a naval aviator he commanded Fighter Squadron 41 and Carrier Air Wing EIGHT, both embarked in USS NIMITZ (CVN 68). As a naval aviator he flew 154 combat missions during his two tours in Vietnam. In addition to combat deployments to Vietnam and the Persian Gulf, he deployed in support of United Nations operations in Iraq, Somalia and Bosnia. VADM Cebrowski flew multiple aircraft, principally fighters, from several carriers and deployed to all ocean areas. He later commanded the assault ship USS GUAM (LPH 9). During Desert Storm, he commanded the aircraft carrier USS MIDWAY (CV 41). Following promotion to flag rank, he became Commander, Carrier Group SIX and Commander, AMERICA Battle Group.

His tours of duty included service with the US Air Force; the staff of Commander-in-Chief, Atlantic Fleet; the staff of the Chief of Naval Operations on four occasions; and with the Joint Staff as Director for Command, Control, Communications and Computers (J-6). Admiral Cebrowski retired from the Navy in August 2001 as the Navy's senior Vice Admiral, stepping down from the Presidency of the Naval War College in Newport, Rhode Island. Upon his retirement in 2001, he was appointed by the Secretary of Defense as the first Director, Force Transformation. As Director, Admiral Cebrowski was the focal point and catalyst for implementing the President and Secretary of Defense's vision for defense transformation. Vice Admiral Cebrowski served his country for over forty years. Admiral Cebrowski was best known as the father of Network Centric Warfare, the intellectual and conceptual underpinnings for *modern warfare in the information age. He wrote and lectured extensively and was regarded as one of* the nation's principle National Security futurists and the intellectual leader of a movement that transformed the Department of Defense in an age of radical change and uncertainty.

Vice Admiral Cebrowski's awards include: The Defense Distinguished Service Medal, the Distinguished Service Medal, five awards of the Legion of Merit, Bronze Star, two Meritorious Service Medals, ten Air Medals and two Navy Commendation Medals with combat "V". In 1991 he was the winner of the John Paul Jones Award for Inspirational Leadership.

Lieutenant General Douglas D. Buchholz, USA
Oct 1996 — Oct 1998

General Buchholz served as the twenty-third Director of J-6. He graduated with a BS Degree in Advertising and Public Relations, and was commissioned in the Regular Army through the Reserve Officers Training Corps program. His initial assignment was to the 58th Signal Battalion at Fort Lewis, WA.

LTG Buchholz completed Signal Officer Basic Course in 1968, the Communications Officer Course, and Airborne and Ranger training in 1969. From 1969 to early 1971, LTG Buchholz served as Platoon Leader and commander, Headquarters Battery, 1st Battalion, 51st Artillery (Pershing) in Neu Ulm, Germany. In Mar 1971, he was assigned to United States Army, Vietnam where he served as Force Development Officer and then as Commander, 510th Signal Company, 73d Signal Battalion, 1st Signal Brigade.

LTG Buchholz attended the Signal Officer Advance Course at Fort Monmouth, NJ, graduating in Feb 1973. In Jun 1974 he earned a Master of Science Degree in Procurement and Contract Management from the Florida Institute of Technology, Melbourne, FL. He spent the next three years as Procurement and Production Officer and Contracting Office at the United States Army Missile Command, Redstone Arsenal, AL.

In Jun 1977, LTG Buchholz returned to Germany, initially as Assistant S-3, and later as the S-3, 141st Signal Battalion, 1st Armored Division. In 1980, he attended the United States Army Command and General Staff College, Fort Leavenworth, KS. From June 1981 to February 1983, LTG Buchholz was assigned as Procurement Officer, and the Executive Officer, Office of the Program Manager, M1 Tank Systems, United States Army Tank Automotive Command, Warren, MI.

In March 1983, LTG Buchholz returned to Fort Lewis, WA, as Commander, 9th Signal Battalion, 9th Infantry Division. Following 26 months of command, he attended the Industrial College of the Armed Forces (ICAF) at Fort McNair, Washington, D.C., graduating in Jun 1986. Following ICAF, he was assigned as the Chief of the Communications, Interoperability, and Maneuver Division, C3J Directorate, United States Army Combined Arms Center, Fort Leavenworth, KS, from Jun 1986 to Jun 1988.

On 14 Jun 1988 LTG Buchholz became the Commander, 3d Signal Brigade, III Corps, Fort Hood, Tx. In this position, he was the first to field a Corps level Mobile Subscriber Equipment tactical communications system to the Army. Returning to Washington, D.C. in Jul 1990, he became Military Secretary for the Military Communications Electronic Board, Office of the J-6, Joint Staff. In Jul 1991, he was promoted to Brigadier General and became Deputy Director, Unified and Specified Command Support, Command, Control, Communications and Computers Directorate, the Joint Staff. LTG Buchholz became the Deputy Commanding General, US Army Signal Center and Fort Gordon and simultaneously became "Chief of Signal' on 15 Jul 1994. In Oct of 1996 LTG Buchholz became the Director for Command, Control, Communications and Computers (J-6).

LTG Buchholz' awards include: The Defense Superior Service Medal, the Legion of Merit, the Bronze Star Medal with oak leaf cluster, the Meritorious Service Medal with four oak leaf clusters, and the Army Commendation Medal with oak leaf cluster.

Lieutenant General John L. Woodward, Jr., USAF
Nov 1998 — Oct 2000

General Woodward served as the twenty-fourth Director of J-6. He entered the Air Force in 1968 after receiving his commission through the Air Force ROTC program Jun 5, 1968. He served in key line, staff and command positions in the command, control, communications and computer systems arena. He commanded four communications units at squadron, group, center and headquarters squadron levels, and was the senior communicator for Headquarters Air Combat Command, Headquarters Air Mobility Command and Headquarters Air Force Space Command. He was the Director of Command and Control Systems for Headquarters North American Aerospace Defense Command and US Space Command, and the Director of Communications and Information for Headquarters Air Force Space Command. Prior to assuming his lead role in the Air Force, General Woodward served as Director of the Command, Control, Communications and Computer Systems Directorate for the Joint Staff and as Deputy Chief of Staff for Communications and Information, and Deputy Chief Information Officer, Headquarters US Air Force, Washington, D.C. Lt Gen Woodward has a BS in biology, Hobart College, Geneva, NY and a MA degree in business administration, Webster College, St. Louis, MO. He is a graduate of the Air Command and Staff College, Armed Forces Staff College, and Air War College, Maxwell Air Force Base, AL.

Assignments Overview:

- Dec 1977 - Jun 1978, Commander, 1801st Headquarters Squadron, Richards-Gebaur AFB, Mo
- Jun 1978 - Jan 1981, Commander, 1881st Communications Squadron, Hill AFB, UT
  Jul 1981 - Jun 1983, Deputy Director, Ballistic Missile Integrated Advanced Warning and Attack Assessment System Architecture, Systems Integration Office, Air Force Space Command
- Jun 1983 - Aug 1985, Director, Space Communications Satellite Systems, Space Comm Division, Colorado Springs, CO. (August 1984 - December 1984, Director, ELF ONE C4 Systems, Saudi Arabia)
- Jul 1986 - Jul 1989, Deputy/Commander, 1961st Communications Group, Clark Air Base, Philippines
- Apr 1990 - Jul 1991, Director, Joint Matters, Personnel and Future Concepts, Office of the Assistant Chief of Staff for C4 Systems, Headquarters US Air Force, Washington, D.C.
- Aug 1994 - May 1996, Director of Communications-Computer Systems, Headquarters Air Combat Command, Langley AFB, VA
- Dec 1996 - Oct 1998, Director of Command Control Systems, Headquarters North American Aerospace Defense Command and US Space Command, and Director of Communications and Information, Headquarters Air Force Space Command, Peterson AFB, CO
- Oct 1998 - May 2000, Director, Command, Control, Communications and Computer Systems Directorate, the Joint Staff, Washington, D.C.
- Oct 2000 Deputy Chief of Staff for Communications and Information, and Deputy Chief Information Officer, Headquarters US Air Force, Washington, D.C.

Lt Gen Woodward's awards include: The Defense Distinguished Service Medal, Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit with oak leaf cluster, Defense Meritorious Service Medal, Meritorious Service Medal with three oak leaf clusters.

Lieutenant General Joseph K. Kellogg, Jr., USA
Oct 2000 — Jul 2003

General Kellogg served as the twenty-fifth Director of J-6. He was commissioned through ROTC on 9 Feb 67. He is a graduate of the Infantry Officer Basic and Advanced Courses, United States Army Command and General Staff College and the United States Army War College. LTG Kellogg has a Masters Degree in Political Science from the University of Kansas.

Assignments Overview:

- Sep 67 - Mar 68 Reconnaissance Platoon Leader, E Company, 2d Battalion (Airborne), 506th Infantry, 101st Airborne Division, United States Army, Vietnam
- Mar 68 - Jul 68 Junior Aide-de-Camp to CG, 101st Airborne Division, United States Army, Vietnam (USARVN)
- Jul 68 - Nov 68 Pathfinder Section Leader, 160th Combat Aviation Group, 101st Airborne Division, USARVN
- Nov 68 - Sep 70 Commander, C Company, 4th Battalion, 2d Basic Combat Training Brigade, United States Army Training Center, Fort Lewis, Washington
- Dec 71 - Nov 72 Executive Officer, Forces Armee Nationale Khmer (Cambodia), Army Advisory Group, Dong Ba Thin Training Battalion, United States Army, Vietnam
- Dec 72 Feb 74 Commander, Special Forces Operations Detachment "A", B Company, later S-3 (Operations), 2d Battalion, 10th Special Forces Group (Airborne), 1st Special Forces, Fort Devens, MA
- Mar 74 - Jul 75 Area Commander, United States Army Phoenix District Recruiting Command
- Dec 76 - Oct 79 Operations Staff Officer, later Chief, Ground Operations Branch, Special Operations Task Force Europe, United States European Command, Germany
- Nov 80 - Jun 83 S-3 (Operations), later, Executive Officer, 1st Brigade, 82d Airborne Division, Fort Bragg, NC
- Jun 83 - Oct 85 Commander, 1st Battalion (Airborne), 504th Infantry, 82d Airborne Division, Fort Bragg, NC
- Oct 85 - Jul 86 Operations Officer, Office of the Chief of Staff, Army, Washington, D.C.
- Jun 87 - Sep 88 G-3 (Operations), 7th Infantry Division (Light), Fort Ord, CA
- Sep 88 - Jul 90 Commander, 3d Brigade, 7th Infantry Division (Light), Fort Ord, CA
- Aug 90 - Sep 91 Chief of Staff, 82d Airborne Division, Fort Bragg, North Carolina and OPERATIONS DESERT SHIELD/STORM, Saudi Arabia
- Sep 91 - Aug 92 Assistant Division Commander (Operations), 82d Airborne Division, Fort Bragg, NC
- Aug 92 - Aug 94 Commanding General, Special Operations Command Europe, United States European Command, Germany
- Nov 96 - Jul 98 Commanding General, 82d Airborne Division, Fort Bragg, NC
- Oct 00 - Jul 03 Director, Command, Control, Communications and Computer Systems, J-6, The Joint Staff, Washington, D.C.

LTG Kellogg's awards include: The Distinguished Service Medal, Silver Star, Defense Superior Service Medal, Legion of Merit (with Oak Leaf Cluster), Bronze Star Medal with "V" Device, Bronze Star Medal (with 3 Oak Leaf Clusters), Defense Meritorious Service Medal, Meritorious Service Medal (with Oak Leaf Cluster), Air Medal with "V" Device.

Lieutenant General Robert M. Shea, USMC
Aug 2003 — Jul 2006

General Shea served as the twenty-sixth Director of J-6. His service spans 33 years. Prior to his service as Director Command Control, Communications and Computer Systems Directorate, Lieutenant General Shea was the Deputy Commander, United States Forces, Japan.

His command positions include Commander of the Marine Component to the Joint Task Force Computer Network Defense, Director of the Marine Corps Command and Control Systems School, Commanding Officer, 9th Communications Battalion, I Marine Expeditionary Force during Desert Shield and Desert Storm. Other assignments include Commanding Officer of two communications companies and the Battalion Communications Officer for 1st Amphibian Tractor Battalion, 3d Marine Division.

Lieutenant General Shea's previous staff assignments include serving as the Director for Command, Control, Communications and Computers (C4) for the Marine Corps, the Chief Information Officer of the Marine Corps, Director of Intelligence for the Marine Corps, the Director for Command, Control and Communications (J-6), for the United States Pacific Command, Head, Command and Control Telecommunications Systems Branch and Head, Resources Branch, C4 Department, Headquarters United States Marine Corps, Assistant Chief of Staff, G6 Operations, 3rd Marine Division, Head, Plans Division and Systems Control Officer for the Defense Communications Agency Pacific Area, the Assistant Inspector-Instructor, 6th Communications Battalion.

Lieutenant General Shea earned a MA from Central Michigan University. He also attended The Basic School, Advanced Communications Officers' Course, the Marine Corps Command and Staff College and the Industrial College of the Armed Forces, National Defense University.

Lieutenant General Shea's awards include: The Department of Defense Superior Service Medal with gold star in lieu of second award, Legion of Merit with gold star, Department of Defense Meritorious Service Medal, Meritorious Service Medal, Navy Commendation Medal and Navy Achievement Medal with gold star.

Vice Admiral Nancy E. Brown, USN
Jul 2006 — Jul 2009

Admiral Brown served as the twenty-seventh Director of J-6. A native of Glen Cove, NY, she was raised in Marion, IL and is a 1973 graduate of Stephens College in Columbia, MO. Following completion of Officer Candidate School VADM Brown reported to her first duty station, Naval Communications Station, Norfolk, VA serving as Communications Watch Officer, Automation Officer and Personnel Officer. She then served as the Special Projects and Manpower Requirements Officer at Naval Telecommunications Command in Washington, D.C.

After her tour in Washington, VADM Brown attended Naval Postgraduate School in Monterey, CA, earning a Master of Science in Communications Systems Management. She was then assigned to the Defense Commercial Communications Office at Scott Air Force Base, Belleville, IL. From this joint assignment, VADM Brown attended the Naval War College and was awarded a Master of Arts in National Security and Strategic Studies. Her follow-on assignment was as Officer in Charge, Naval Radio and Receiving Facility Kami Seya, Japan. Returning from overseas, VADM Brown was assigned to the Joint Tactical Command, Control and Communications Agency in Washington. After this second joint tour, she was assigned as the Executive Officer Naval Communications Station in San Diego. Following this tour, VADM Brown attended the Army War College Senior Course in Carlyle, PA.

In August 1993, VADM Brown assumed command of Naval Computer and Telecommunications Station Cutler, ME. After completing her command tour, she was assigned in Aug 1995 to the National Security Council staff at the White House. Following, she returned to command at the Naval Computer and Telecommunications Area Master Station Atlantic, Norfolk and upon completion again returned to the White House as the Deputy Director, White House Military Office. In October 2000, she reported to the Chief of Naval Operations as Deputy Director and Fleet Liaison, Space, Information Warfare, Command and Control (N6B). In Aug 2002 she assumed duties as Vice Director for Command, Control, Communications, and Computer Systems (J-6), the Joint Staff. In Aug 2004 she deployed to Iraq becoming the first Multi-National Force–Iraq C6, Baghdad. In Aug 2005 VADM Brown assumed the duties as J-6 Director for North American Aerospace Defense Command and United States Northern Command. In August 2006 she assumed duties as the Director, Command, Control, Communications and Computer Systems, The Joint Staff.

Admiral Brown's awards include: The Defense Distinguished Service Medal, the Defense Superior Service Medal (with two Oak Leaf Clusters), the Legion of Merit (with Gold Star), the Bronze Star Medal, the Defense Meritorious Service Medal (with Oak Leaf Cluster), the Meritorious Service Medal, the Navy and Marine Corps Commendation Medal, the Navy and Marine Corps Achievement Medal, the Iraq Campaign Medal (with two Bronze Stars), the Global War on Terrorism Medal, the Armed Forces Service Medal, and the National Defense Service Medal (with two Bronze Stars).

Lieutenant General Dennis L. Via, USA
Jul 2009 — Apr 2011

General Via served as the twenty-eighth Director of J-6. He is the principal advisor to the Chairman of the Joint Chiefs of Staff on all C4 systems matters within the Department of Defense.

General Via is a native of Martinsville, VA. He attended Virginia State University in Petersburg, VA, where he graduated in May 1980 as a Distinguished Military Graduate, and received his commission as a Second Lieutenant in the Signal Corps. He holds a Master's Degree from Boston University. General Via is a graduate of the United States Army Command and General Staff College, and the United States Army War College.

General Via began his career with the 35th Signal Brigade, XVIII Airborne Corps, Fort Bragg, NC. Principal assignments include Commanding General, CECOM Life Cycle Management Command and Fort Monmouth, NJ; Commanding General, 5th Signal Command, and US Army Europe & Seventh Army (USAREUR) Chief Information Officer/Assistant Chief of Staff, G6 (CIO/G6); Director, Global Operations, Defense Information Systems Agency (DISA) and Deputy Commander, Joint Task Force-Global Network Operations (USSTRATCOM); Commander, 3rd Signal Brigade and III Corps Assistant Chief of Staff, G6; Commander, 82nd Signal Battalion, 82nd Airborne Division); and Division Chief, Joint Requirements Oversight Council (JROC) Division, Office of the Deputy Chief of Staff, Army G8, Headquarters, Department of the Army.

LTG Via's awards include: Two awards of the Distinguished Service Medal, the Defense Superior Service Medal, two awards of the Legion of Merit, two awards of the Defense Meritorious Service Medal and five awards of the Meritorious Service Medal. General Via is also authorized to wear the Joint Staff Identification Badge, the Army Staff Identification Badge, and the Master Parachutist Badge.

LIEUTENANT GENERAL LARRY O. SPENCER, USAF
Apr 2011—Nov 2011

General Spencer is the Director, Force Structure, Resources, and Assessment, Joint Staff, the Pentagon, Washington, D.C. and was Dual-hatted as the Director J-6. He develops capabilities, conducts studies, analysis, and assessments, and evaluates plans, programs, and strategies for the Chairman of the Joint Chiefs of Staff. He serves as the Joint Requirements Oversight Council (JROC) Secretary and as the Chairman of the Joint Capabilities Board (JCB).

General Spencer was born in Washington, D.C. He received his Bachelor of Science degree in industrial engineering technology from Southern Illinois University, Carbondale, and was commissioned through Officer Training School in 1980 as a distinguished graduate. General Spencer has commanded a squadron, group and wing, and he was Vice Commander of the Oklahoma City Air Logistics Center. He was also the first Air Force Officer to serve as Assistant Chief of Staff in the White House Military Office. He served as the Comptroller and then Director of Mission Support (A7) at a major command; and held positions within the Air Staff and Secretary of the Air Force. Prior to his current assignment, the general was Deputy Assistant Secretary for Budget, Office of the Assistant Secretary of the Air Force for Financial Management and Comptroller, Headquarters U.S. Air Force, Washington, D.C

ASSIGNMENTS

1. February 1980 - July 1982, Chief, Cost Analysis Branch, Headquarters Air Force Reserve, Robins AFB, GA
2. July 1982 - August 1986, cost and budget officer, Headquarters U.S. Air Force, Washington, D.C.
3. August 1986 - July 1989, budget officer and executive officer, Headquarters Military Airlift Command, Scott AFB, IL
4. July 1989 - June 1990, student, Marine Corps Command and Staff College, Quantico, VA
5. June 1990 - August 1993, Commander, 4th Comptroller Squadron, Seymour Johnson AFB, NC
6. August 1993 - June 1994, student and research fellow, Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington, D.C.
7. June 1994 - August 1996, Assistant Chief of Staff, White House Military Office, the White House, Washington, D.C.
8. August 1996 - January 1998, Commander, 72nd Support Group, Tinker AFB, OK
9. February 1998 - July 1999, Commander, 75th Air Base Wing, Hill AFB, UT
10. September 1999 - June 2003, Command Comptroller, Headquarters Air Combat Command, Langley AFB, VA
11. June 2003 - August 2005, Director of Mission Support, Headquarters AFMC, Wright-Patterson AFB, OH
12. August 2005 - August 2006, Vice Director, Oklahoma City Air Logistics Center, Tinker AFB, OK
13. August 2006 - October 2007, Director, Budget Operations and Personnel, Office of the Assistant Secretary of the Air Force for Financial Management and Comptroller, the Pentagon, Washington, D.C.
14. October 2007 – March 2010, Deputy Assistant Secretary for Budget, Office of the Assistant Secretary of the Air Force for Financial Management and Comptroller, Headquarters U.S. Air Force, Washington, D.C.
15. April 2010 – present, Director, Force Structure, Resources, and Assessments, The Joint Staff, Washington, D.C.

MAJOR AWARDS AND DECORATIONS: Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit with two oak leaf clusters, Meritorious Service Medal with four oak leaf clusters, Air Force Commendation Medal, Air Force Achievement Medal, Air Force Recognition Ribbon with oak leaf cluster

References

- Arlington Cemetery Web Site, http://www.arlingtoncemetery.net
- Army Flag officer biography database, https://www.gomo.army.mil/Ext/Portal/MainHome.aspx
- Flag Officer Biographies Army, CECOM LCMC Historical Office
- Flag officer Biographies Navy, Naval History and Heritage Command (NHHC)
- Flag officer Biographies US Air Force, http://www.af.mil/information/bios
- Historical Division, Joint Secretariat, Joint Chiefs of Staff
- Joint Assault Signal Company (JASCO), http://signal150.army.mil/history-JASCO.html
- Joint Chiefs of Staff Special Historical Study, Chronology of JCS Organization 1945-1984, Historical Division, Joint Secretariat, Joint Chiefs of Staff
- Organization and Functions of the Joint Staff, JCS Admin Pub 1.1, The Joint Chiefs of Staff, 1 Oct 1988
- Organizational Development of the Joint Chiefs of Staff 1942 -1989, Historical Division, Joint Secretariat, Joint Chiefs of Staff
- The Chairmanship of the Joint Chiefs of Staff 1949-1999, Historical Division, Joint Secretariat, Joint Chiefs of Staff, 2000
- The Chairmanship of the Joint Chiefs of Staff, Historical Division, Joint Secretariat, Joint Chiefs of Staff, 1995
- The Early History of NSA, George F. Howe
- The Joint Staff Officer's Guide 2000, (JFSC Pub 1) National Defense University Joint Forces Staff College
- US Army Center of Military History, http://www.history.army.mil/

Photograph Credits

- Pg 7 - US Navy Photograph
- Pg 8- US Naval Historical Center Photo from the collection of Admiral Arleigh A. Burke, USN
- Pg 9 - White House Photo
- Pg 16,18 - Pictures were taken at the National Archives and are offered Royalty Free by the World War II Picture section of Historylink101.com. Pictures can be found at the World War II Picture Page
- Pg 17 - US Army Signal Corps Photo http://signal150.army.mil/history-JASCO.html
- Pg 19 - Annotated B-29 Radio position (Used by permission, aafradio.org/flightdeck/b29.htm)
- Pg 20,21 - US Army Signal Corps
- Pg 18 - Joint Staff Photo
- Pg 22 - http://www.hilltoparmyradios.com
- Pg 23 - US Naval Historical Center Photograph
- Pg 24 - http://www.spawar.navy.mil/sandiego/anniversary/jpg/verdin.jpg
- Pg 26 - US Air Force photo/Senior Airman Christopher Hubenthal
- Pg 27, 28 - US Air Force Photo www. Losangeles.af.com
- Pg 40 - Joint Staff Photo

"We live in an increasingly competitive security environment. Capabilities that previously were the monopoly of nation states are now proliferated across the security landscape. As a consequence, we must learn faster, understand more deeply and adapt more quickly than our adversaries."

GEN Martin Dempsey
Chairman, JCS

Connecting The Warfighter