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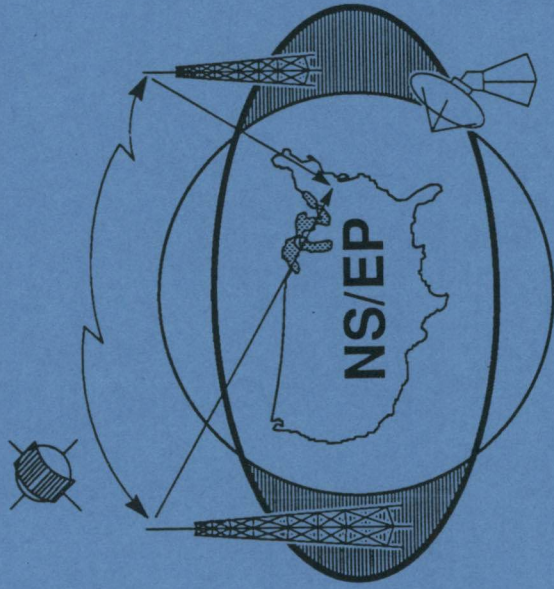
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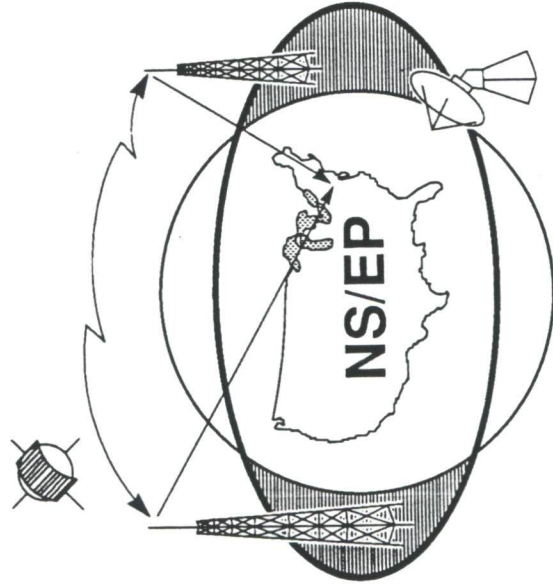
**RESTRUCTURED NATIONAL LEVEL NS/EP
TELECOMMUNICATIONS PROGRAM**



**POLICY COORDINATING COMMITTEE ON
NATIONAL SECURITY TELECOMMUNICATIONS
AND INFORMATION SYSTEMS**

NOVEMBER 14, 1991

**RESTRUCTURED NATIONAL LEVEL NS/EP
TELECOMMUNICATIONS PROGRAM**



**POLICY COORDINATING COMMITTEE ON
NATIONAL SECURITY TELECOMMUNICATIONS
AND INFORMATION SYSTEMS**

NOVEMBER 14, 1991

THE PURPOSE OF THE BRIEFING IS TO PRESENT THE RESULTS OF AN INDEPENDENT
ASSESSMENT OF THE NCS NATIONAL LEVEL PROGRAM AND TO SEEK APPROVAL FOR
A RESTRUCTURED FISCAL YEAR 1993 NLP.



PURPOSE

- PRESENT THE PANEL OF EXPERTS REPORT
- SEEK APPROVAL FOR THE RESTRUCTURED FISCAL YEAR 1993 NLP

THERE ARE SEVERAL DOCUMENTS AND MEMORANDA THAT ARE PARTICULARLY RELEVANT TO THIS PRESENTATION. THEY INCLUDE: A REPORT PREPARED BY A SUBCOMMITTEE OF THE NCS COMMITTEE OF PRINCIPALS (COP) WHICH EXAMINED THREE TECHNICAL ALTERNATIVES TO THE NETS PROGRAM. THIS COP SUBCOMMITTEE REPORT WAS SUBMITTED TO THE EXECUTIVE OFFICE OF THE PRESIDENT ALONG WITH THE MANAGER'S FY92 NLP IN JUNE OF 1990. THE FY92 NLP WAS APPROVED BY THE WHITE HOUSE IN OCTOBER, 1990 WITH DIRECTION TO FURTHER EXAMINE THE PROVISION OF POWER FOR TELECOMMUNICATIONS AND TO CONTINUE TO INVESTIGATE POTENTIAL LOWER COST ALTERNATIVES. IN FEBRUARY, 1991 THE WHITE HOUSE PROVIDED ADDITIONAL GUIDANCE TO THE EXECUTIVE AGENT WHICH DELAYED THE INITIAL OPERATIONAL CAPABILITY OF THE NETS PROGRAM FOR TWO YEARS. THE MEMO PROVIDED ADDITIONAL GUIDANCE AS DESCRIBED ON THE NEXT EXHIBIT. THE OCTOBER 15, 1991 MEMORANDUM REAFFIRMED NS/EP TELECOMMUNICATIONS POLICY AND FUNCTIONAL REQUIREMENTS.



BACKGROUND

- SUBCOMMITTEE REPORT TO THE NCS COMMITTEE OF PRINCIPALS, MAY 29, 1990
- MEMORANDUM FORWARDING THE FY92 NATIONAL LEVEL PROGRAM, JUNE 21, 1990
- FY92 APPROVAL MEMORANDUM, OCTOBER 9, 1990
- WHITE HOUSE MEMORANDUM, FEBRUARY 28, 1991
- EXECUTIVE AGENT'S MEMORANDUM, MARCH 15, 1991
- WHITE HOUSE MEMORANDUM, OCTOBER 15, 1991

WHITE HOUSE AND EXECUTIVE AGENT POLICY GUIDANCE PROVIDED THE FOLLOWING:
THE NETS IOC WAS DELAYED FOR TWO YEARS WITH THE CAVEAT THAT SATISFACTORY EMERGENCY ENERGY AND POWER PROGRAMS HAD BEEN DEVELOPED. CSI AND CNS PROGRAM FUNDING ELEMENTS IN THE NLP WERE TO BE ADJUSTED IN ACCORDANCE WITH THE DELAY IN NETS. FINALLY, DURING THE DELAY, ALTERNATIVE TECHNOLOGIES WERE TO BE EXPLORED WHICH MIGHT SATISFY NETS FUNCTIONAL REQUIREMENTS AT REDUCED COST.



POLICY GUIDANCE FROM WHITE HOUSE/
EXECUTIVE AGENT**

- THE NETS INITIAL OPERATING CAPABILITY (IOC) DELAYED UNTIL FY 1996
- ADJUST CSI AND CNS FUNDING ON ELEMENTS FOR THE REVISED NETS IOC
- THE NEW NETS IOC IS BASED ON THE PREMISE THAT DOE WILL PROVIDE SATISFACTORY EMERGENCY ENERGY AND POWER PROGRAMS
- DURING THIS TIME, ALTERNATIVE TECHNOLOGIES TO SATISFY NETS FUNCTIONAL REQUIREMENTS SHOULD BE EXPLORED

* WHITE HOUSE MEMORANDUM TO EXECUTIVE AGENT,
FEBRUARY 28, 1991

THE OMNCS TOOK FOUR ACTIONS IN RESPONSE TO THE GUIDANCE:

THE FY93 NLP WAS FORWARDED TO THE WHITE HOUSE WITH A MODIFIED FUNDING PROFILE, REFLECTING THE CHANGE IN NETS IOC.

A REAFFIRMATION OF POLICY GUIDANCE AND THE FUNCTIONAL REQUIREMENTS WAS REQUESTED.

A FUNCTIONALLY BASED RFP, AS OPPOSED TO THE EARLIER SYSTEM SPECIFICATION BASED RFP, WAS PREPARED TO MEET THE IOC OF FY96 AN INDEPENDENT "PANEL OF EXPERTS" WAS ESTABLISHED TO CONDUCT AN UNBIASED REVIEW OF THE NLP.



APPROACH TO GUIDANCE

- FY93 NLP FORWARDED TO WHITE HOUSE IN JULY 1991
- REQUESTED WHITE HOUSE REAFFIRMATION OF POLICY AND RESULTING FUNCTIONAL REQUIREMENTS
- DEVELOPED FUNCTIONAL RFP TO MEET IOC FY96
- ESTABLISHED PANEL TO CONDUCT INDEPENDENT ASSESSMENT OF THE NLP

THE CHARGE TO THE PANEL IS PROVIDED BELOW.



CHARGE TO PANEL

WITH RESPECT TO NS/EP TELECOMMUNICATIONS, REVIEW:

- THE HISTORY AND EVENTS THAT HAVE LED TO THE CURRENTLY PROPOSED NLP
- REQUIREMENTS
- THE TECHNICAL BASIS FOR THE PROPOSED PROGRAM

...AND ASSESS:

- THE ABILITY OF THE CURRENTLY PROPOSED PROGRAM TO MEET THE REQUIREMENTS
- POTENTIAL ALTERNATIVE ARCHITECTURES THAT OFFER A RANGE OF CAPABILITIES, IMPROVE ROBUSTNESS, AND REDUCE COST

THIS SECTION OF THE PRESENTATION PROVIDES THE PANEL OF EXPERTS REVIEW OF THE NLP AND CONTAINS THEIR RECOMMENDATIONS TO THE MANAGER. A COMPLETE DISCUSSION OF THE PANEL'S WORK IS PROVIDED IN THE PANEL'S FINAL REPORT: **ENDURING TELECOMMUNICATIONS - A NEW PERSPECTIVE Report on National Level Telecommunications Infrastructure Improvements October 1991**

PANEL OF EXPERTS

**REVIEW OF THE NATIONAL LEVEL NS/EP
TELECOMMUNICATIONS PROGRAM (NLP)**

**Presentation to the Policy Coordinating Committee on National Security
Telecommunications and Information Systems**

November 14, 1991

THE PANEL MEMBERS INCLUDED:

DR. WESLEY POSVAR: FORMER PRESIDENT (24 YEARS) OF THE UNIVERSITY OF PITTSBURGH, EXPERIENCED WITH CONTINUITY OF GOVERNMENT CONCERNS AS CHAIRMAN OF THE FEMA ADVISORY BOARD, FOUNDER OF THE POLITICAL SCIENCE DEPARTMENT AT THE AIR FORCE ACADEMY, AND A RETIRED AIR FORCE FIGHTER PILOT AND BRIGADIER GENERAL.

FRANK CARR: PAST COMMISSIONER FOR INFORMATION RESOURCES OF THE GENERAL SERVICES ADMINISTRATION, FORMER MEMBER OF THE NCS COMMITTEE OF PRINCIPALS.

ROBERT EVERETT: PAST PRESIDENT AND CHIEF EXECUTIVE OFFICER OF THE MITRE CORPORATION, PAST CHAIRMAN OF THE PRESIDENT'S DEFENSE SCIENCES BOARD, AND MEMBER OF THE FEMA ADVISORY BOARD.

VAUGHN O. LANG (LTG USA Ret.): HELD SENIOR COMMAND CONTROL AND COMMUNICATIONS POSTS FOR DEFENSE MOBILIZATION REQUIREMENTS

ED MINKEL: PAST MANAGING DIRECTOR AND DEFENSE DIRECTOR AT THE FEDERAL COMMUNICATIONS COMMISSION, FORMER MEMBER OF THE NCS COMMITTEE OF PRINCIPALS.

Panel Members

- Dr. Wesley Posvar (Panel Chair)
- Mr. Frank Carr
- Mr. Robert Everett
- LTG Vaughn Lang (USA ret.)
- Mr. Edward Minkel

THE PANEL WAS BRIEFED AND STUDIED THE AREAS IDENTIFIED BELOW.

THE PANEL ALSO RECEIVED INPUT IN THEIR DELIBERATIONS FROM SENIOR GOVERNMENT AND INDUSTRY REPRESENTATIVES AND MEMBERS OF THE COMMITTEE OF PRINCIPALS. PARTICIPANTS INCLUDED: JULIAN WRIGHT (DEPUTY ASSISTANT SECRETARY ENERGY FOR ENERGY EMERGENCIES), JOHN GRIMES (DEPUTY ASD C3D), SOL BUXBAUM (AT&T), AND FROM THE COMMITTEE OF PRINCIPALS, BRUCE CAMPBELL (FEMA), MICHAEL CORRIGAN (GSA), ROBERT WOODS (VETERANS AFFAIRS), AND DAVID AUSTIN (NSA).

Study Areas

- Threats to NS/EP Telecommunications
- Policy Guidance
- Requirements
- Energy
- Technical Approaches

Outside Participation From Senior Government,
Senior Industry, And Committee of Principals

THE PANEL CONCLUDED THAT WHILE THE OVERALL THREAT HAS CERTAINLY CHANGED IN MANY DIMENSIONS, THERE ARE SUFFICIENT NUCLEAR AND NON-NUCLEAR THREATS TO WARRANT A NATIONAL LEVEL NS/EP TELECOMMUNICATIONS PROGRAM. THE PANEL RECOMMENDATIONS REGARDING THE THREAT ARE IDENTIFIED IN THE EXHIBIT BELOW.

Panel Recommendations...

Threats

- The NCS should select telecommunication programs and initiatives that allow for easy adaptation to heightened nuclear scenarios.
- NS/EP telecommunication initiatives that provide small numbers of clearly identifiable targets for destruction or disruption should be avoided.
- The Manager, NCS, in coordination with the intelligence community, should continue to take a leadership role in the investigation and mitigation of network security threats to our nation's telecommunication and information systems.

IN REGARD TO POLICY GUIDANCE THE PANEL BELIEVED THE PROGRAM TO BE WELL
POSITIONED AND RESPONSIVE.

Policy Guidance

- Policy guidance confirms the need for a government-wide NS/EP telecommunications program focused on national leadership and continuity of essential government functions.
- The program should maximize use of commercial, government, and private telecommunication assets.
- There is a need for communications among the Federal Government, other levels of government, civilian organizations and individuals.
- Emergency communications must be primarily voice.

THE PANEL EXAMINED BOTH FUNCTIONAL REQUIREMENTS AND USER REQUIREMENTS. THE PANEL MADE THE RECOMMENDATION IN REGARD TO USER REQUIREMENTS AS IDENTIFIED BELOW.

Panel Recommendations...

Requirements

- The Manager, NCS, should work with NCS member organizations to develop their requirements in a form that will support the design, implementation, and operation of the selected NS/EP telecommunications system or service.

THE PANEL CONCLUDED THAT THE ISSUE OF ENDURING ENERGY FOR TELECOMMUNICATIONS WAS NOT A CAUSE FOR DELAYING THE IMPLEMENTATION OF THE NLP. THE PANEL FOUND THE DEPARTMENT OF ENERGY PROGRAMS TO BE ON THE RIGHT TRACK AND BELIEVED THE COOPERATIVE EFFORTS BETWEEN THE OMNCS AND THE DOE WILL PROVE TO BE EFFECTIVE. THE PANEL MADE THE RECOMMENDATIONS IDENTIFIED BELOW IN REGARD TO ENERGY.

Panel Recommendations...

Energy

- Progress in meeting NS/EP telecommunication needs should not be delayed until enduring energy programs are in place. Therefore, implementation of an NS/EP telecommunications improvement program should proceed.
- The DOE and the OMNCS should continue to work together to define further the interdependencies of the energy and telecommunication infrastructures and to pursue effective solutions to the enduring energy issue.
- Efforts to understand and reduce power demand by telecommunication resources should be pursued.

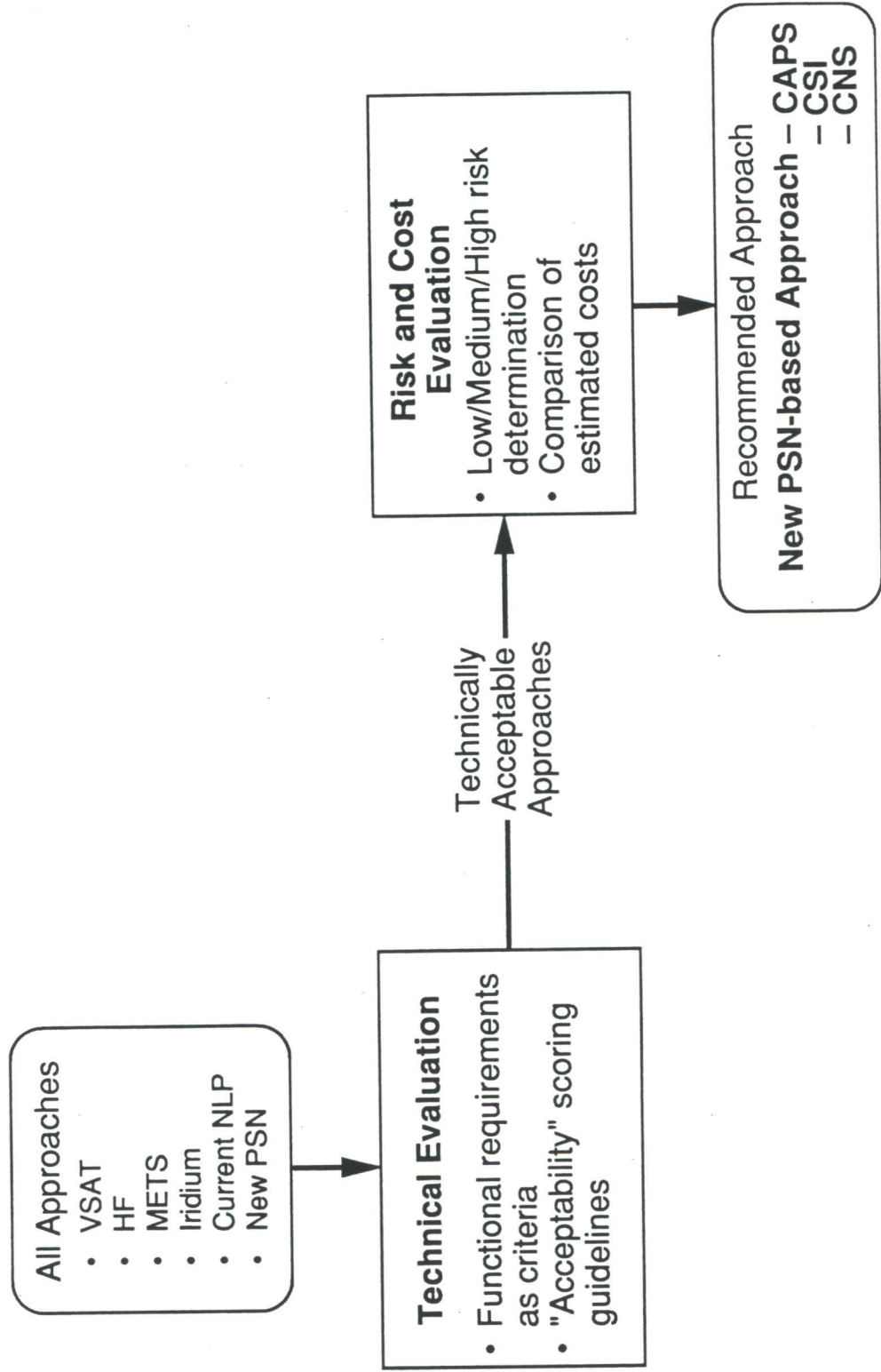
SIX ALTERNATIVES WERE EXAMINED. FOR EACH ALTERNATIVE, SEVERAL LEVELS OF IMPLEMENTATION WERE ALSO EXAMINED. THE DETAILS OF EACH APPROACH ARE FULLY DESCRIBED IN THE PANEL'S FINAL REPORT. THE FIRST FOUR (VERY SMALL APERTURE TERMINAL SATELLITE, HIGH FREQUENCY RADIO, MESSAGE BASED EMERGENCY TELECOMMUNICATIONS SERVICE, AND IRIDIUM) WERE ORIGINALLY PUT FORWARD BY THE COP SUBCOMMITTEE. THE CURRENT NLP WAS EXAMINED AS WAS A NEW PSN-BASED APPROACH.

IN THE FIRST STEP, EACH APPROACH WAS ANALYZED TO SEE WHETHER IT MET THE FUNCTIONAL REQUIREMENTS. IF THE APPROACH FAILED TO MEET ANY OF THE SIX FUNCTIONAL REQUIREMENTS, IT WAS NO LONGER CONSIDERED AS A COMPLETE ALTERNATIVE.

IN THE SECOND STEP, THE REMAINING APPROACHES WERE COMPARED FOR ENGINEERING AND DEVELOPMENT RISK, SCHEDULE RISK AND OPERATIONAL RISK. ONCE THIS PROFILE WAS COMPLETED, A COST ESTIMATE WAS DEVELOPED FOR EACH APPROACH.

TO THE DEGREE POSSIBLE, ALL ASSESSMENTS REFLECT "APPLES TO APPLES" COMPARISONS. EACH APPROACH WAS CONCEIVED AS A COMPLETE ALTERNATIVE TO THE CURRENT NLP -- THAT IS, TO PROVIDE ACCESS, TRANSPORT AND PRIORITY TREATMENT TO SOME 22,000 USERS AT 7,000 LOCATIONS.

Assessment Methodology



THREE OF THE FUNCTIONAL REQUIREMENTS ULTIMATELY SERVED AS DISCRIMINATORS BETWEEN THE APPROACHES.

VOICE BAND SERVICE ELIMINATED METS, THE PACKET SWITCHED, MESSAGE BASED SOLUTION, SINCE IT WOULD NOT SUPPORT VOICE.

SURVIVABILITY ELIMINATED APPROACHES WHICH RELIED UPON A FEW FACILITIES WHICH COULD BE EASILY TARGETED; LIKE SATELLITE FACILITIES.

INTRA/INTERAGENCY COMMUNICATIONS (WHICH REFERS TO THE ABILITY TO PROVIDE PRIORITY SERVICES TO CRITICAL USERS IN A MANNER WHICH MITIGATES THE EFFECTS OF CONGESTION) ELIMINATED HF AND IRIDIUM AS STAND ALONE SOLUTIONS.

THE TECHNICAL EVALUATION RESULTS ARE PROVIDED IN THE NEXT EXHIBIT

Functional Requirements For NS/EP Telecommunications

VOICE BAND SERVICE	The service must provide voice band service in support of presidential communications.
INTEROPERABILITY	The service must interoperate with and use the resources of selected other government or private facilities, systems, and networks through the application of standards.
SURVIVABILITY/ ENDURABILITY	The service must provide for the interconnection of surviving users under a broad range of circumstances from widespread damage from natural or manmade disaster up to and including nuclear war.
INTERNATIONAL INTERFACE	The service must provide access to and egress from international service.
NATIONWIDE COVERAGE	The service must provide readily available nationwide coverage to support national security leadership and intra/interagency emergency operations.
INTRA/INTERAGENCY EMERGENCY OPERATIONS	Common user service must provide NS/EP traffic with priority service.

THE TECHNICAL EVALUATION RESULTS ARE SUMMARIZED IN THE TABLE BELOW.

VSAT SYSTEMS, WHILE A MATURE, TECHNICALLY LOW RISK OPTION, FAILED BECAUSE THEY ARE VULNERABLE TO SINGLE POINT FAILURE IN THE SATELLITE OR IN THE HUBBING ARRANGEMENT COMMON TO MOST VSAT IMPLEMENTATIONS.

HIGH FREQUENCY RADIO IS A RELATIVELY HIGH COST OPTION WHICH WOULD NOT ALLOW PRIORITY SERVICE TO NS/EP USERS.

METS, A PACKET SWITCHED DATA APPROACH FAILED BECAUSE IT WILL NOT SUPPORT VOICE. VOICE WAS CONSIDERED CRITICAL NOT JUST IN LIGHT OF THE FUNCTIONAL REQUIREMENTS PROMULGATED BY THE WHITE HOUSE, BUT ALSO BASED ON THE COLLECTIVE EXPERIENCE OF THE PANEL MEMBERS.

LIKE THE VSAT OPTION, IRIDIUM FAILED BECAUSE IT IS VULNERABLE TO THE LOSS OF A LIMITED NUMBER OF FACILITIES. IT ALSO HAS SIGNIFICANT SCHEDULE RISKS IDENTIFIED BELOW.

ONLY THE CURRENT NLP AND THE NEW PSN-BASED APPROACH MEET ALL THE FUNCTIONAL REQUIREMENTS.

Technical Evaluation Results

ALTERNATIVE CRITERIA	CLOSED/PRIVATE SYSTEMS			OPEN/PUBLIC NETWORK-BASED SERVICES		
	VSAT	HF	METS	IRIDIUM	CURRENT NLP	NEW PSN
VOICE BAND SERVICE	Acceptable	Acceptable	<i>Unacceptable</i>	Acceptable	Acceptable	Acceptable
INTEROPERABILITY	Minimally Acceptable	Minimally Acceptable	Unacceptable	Acceptable	Very Good	Very Good
SURVIVABILITY/ ENDURABILITY	<i>Unacceptable</i>	Good	Acceptable	<i>Unacceptable</i>	Acceptable	Acceptable
INTERNATIONAL INTERFACE	Acceptable	Minimally Acceptable	Unacceptable	Very Good	Good	Good
NATIONWIDE COVERAGE	Acceptable	Acceptable	Minimally Acceptable	Good	Very Good	Very Good
INTRA-/INTERAGENCY EMERGENCY OPERATIONS	Good	<i>Unacceptable</i>	Good	Unacceptable	Acceptable	Good

AFTER THE INITIAL TECHNICAL EVALUATION AGAINST THE FUNCTIONAL REQUIREMENTS, THE FIRST FOUR APPROACHES WERE NO LONGER UNDER CONSIDERATION. FOR COMPLETENESS HOWEVER, THE PANEL DEVELOPED COST AND RISK ASSESSMENTS FOR ALL OF THE APPROACHES.

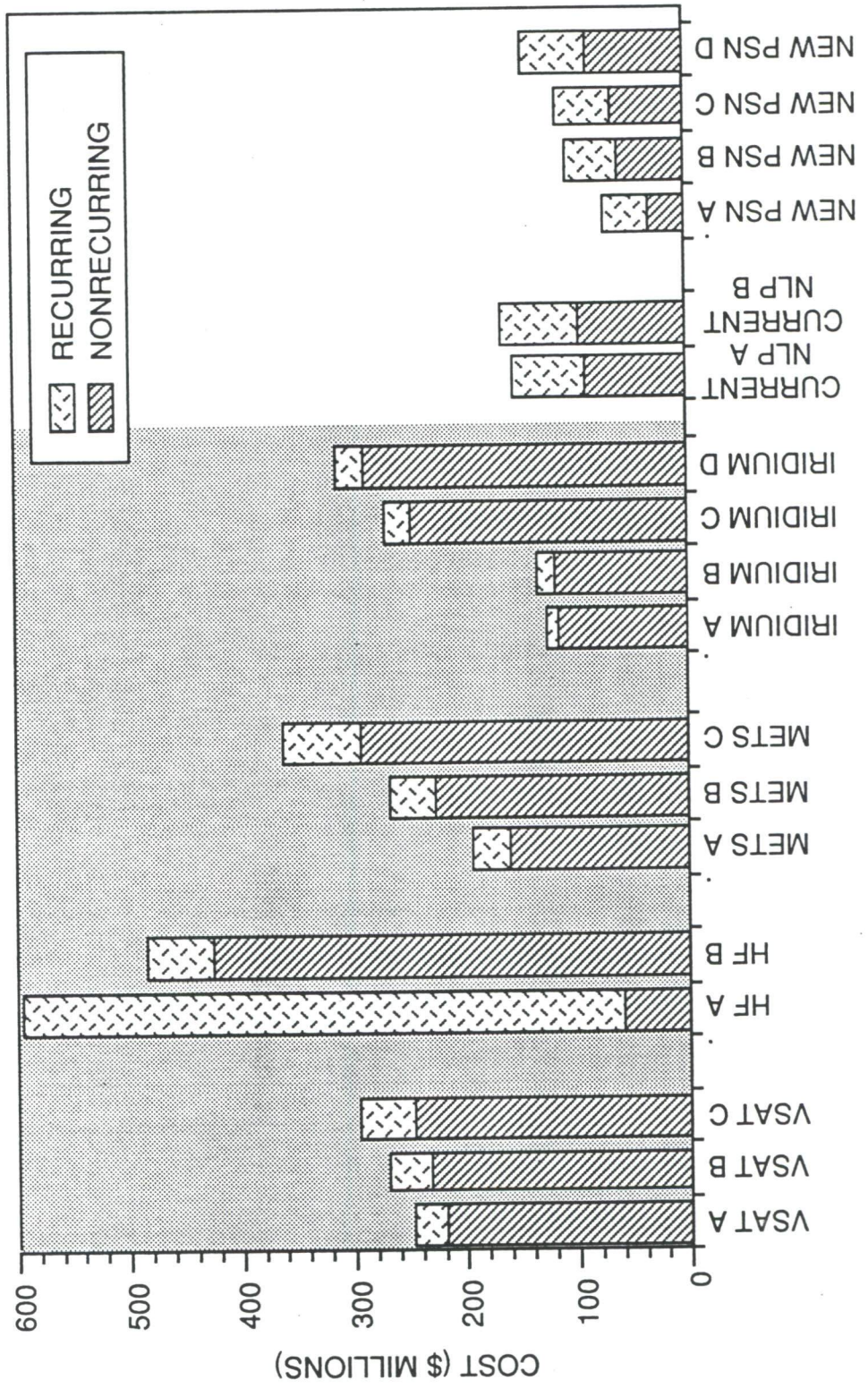
THE RISK ASSESSMENT REVEALED THAT THE TWO REMAINING TWO APPROACHES WERE SIMILAR IN TERMS OF RISK. COST BECAME THE DETERMINING FACTOR IN THE FINAL SELECTION OF THE TECHNICAL APPROACH.

Risk Evaluation Results

		CLOSED/PRIVATE SYSTEMS			OPEN/PUBLIC NETWORK-BASED SERVICES		
		VSAT	HF	METS	IRIDIUM	CURRENT NLP	NEW PSN
ALTERNATIVE RISK	ENGINEERING AND DEVELOPMENT	Low/ Medium	Low/ Medium	Low	Medium	Low/ Medium	Low/ Medium
	SCHEDULE	Low	Low/ Medium	Medium	High	Low/ Medium	Low/ Medium
	OPERATION	High	High	Medium/ High	Medium/ High	Low/ Medium	Low

THE COST EVALUATION RESULTS ARE DEPICTED IN THE EXHIBIT BELOW. THE NEW PSN-BASED APPROACH WAS LESS EXPENSIVE THAN ANY OTHER APPROACH.

Cost Evaluation Results



THE NEW PSN BASED APPROACH SATISFIES THE FUNCTIONAL REQUIREMENTS, IS RELATIVELY LOW IN RISK AND IS THE LEAST COSTLY. IT ALSO PROVIDES SOME OTHER BENEFITS AS HIGHLIGHTED BELOW.

New PSN-based Approach Benefits

- Technology Diversity
- Ease of Technical Evolution
- Flexibility of Subscriber Assignment
- User Familiarity
- Insensitivity to Disaster Scenario
- Use of Existing Resources

IN CONSIDERATION OF THE ABOVE, THE PANEL RECOMMENDS A NEW PROGRAM BE ADOPTED TO REPLACE NETS. THE PANEL CALLED THE NEW PROGRAM CAPS FOR COMMERCIAL ACCESS AND PRIORITY SERVICE. THE PANEL ALSO RECOMMENDS THAT CNS AND CSI BE RETAINED IN THE OVERALL NLP.

New National Level Program

- Commercial Access and Priority Service (CAPS)
- Commercial SATCOM Interconnectivity (CSI)
- Commercial Network Survivability (CNS)

THE PANEL RECOMMENDED THAT THE USE OF PERFORMANCE ENHANCEMENT MODULES (DESCRIBED IN DETAIL IN THEIR REPORT) BE CONSIDERED FOR POSSIBLE FUTURE ENHANCEMENT. IN ADDITION, THE USE OF THE OTHER TECHNOLOGIES EXAMINED BY THE PANEL SHOULD BE CONSIDERED FOR THE FUTURE, AS POTENTIAL ADJUNCTS TO THE BASIC PROGRAM BECAUSE THEY MAY PROVIDE SOME BENEFITS.

Panel Recommendations...

Technical Approach

- The new PSN-based approach, without performance enhancement modules, should be implemented to satisfy NS/EP telecommunication requirements and to serve as the foundation of the new NLP.
- Implementation of performance enhancement modules, as well as the application of other technologies discussed in this report, should be analyzed as possible end-to-end performance improvements.
- Selective use of other technologies and performance enhancement modules should be justified independently of the conclusions of this report.

THE MAJOR RECOMMENDATION OF THE PANEL IS PROVIDED BELOW.

Panel Recommendations...

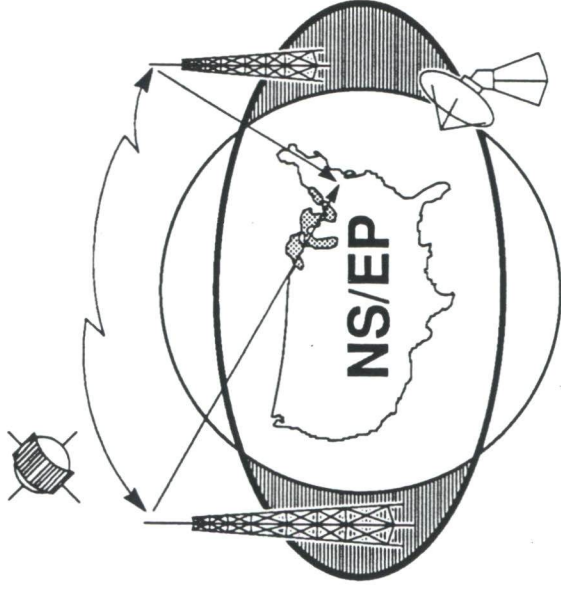
Technical Approach

The panel strongly urges that implementation of the new NLP, consisting of Commercial Access and Priority Service (CAPS), Commercial SATCOM Interconnectivity (CSI), and Commercial Network Survivability (CNS), proceed without delay.

THIS SECTION OF THE BRIEFING PRESENTS THE OMNCS RESPONSE TO THE PANEL OF EXPERTS RECOMMENDATIONS.

UNCLASSIFIED

**OFFICE OF THE MANAGER, NCS
RESPONSE TO THE PANEL OF EXPERTS**



NOVEMBER 14, 1991

UNCLASSIFIED

THE OMNCS CONCURS WITH THE PANEL FINDINGS AS DESCRIBED BELOW.

UNCLASSIFIED



OMNCS RESPONSE TO PANEL OF EXPERTS (U)

- PANEL OF EXPERTS RECOMMENDATIONS MEET:
 - THREAT
 - POLICY DIRECTION
 - FUNCTIONAL REQUIREMENTS
 - AGENCY RESPONSIBILITIES AND USER NEEDS

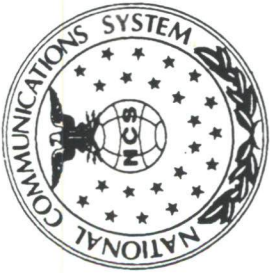
- PANEL OF EXPERTS RECOMMENDED TECHNICAL APPROACH:
 - PROVIDES SURVIVABLE AND ENDURING CAPABILITY
 - SUPPORTS OPEN SYSTEMS ARCHITECTURE APPROACH
 - EMPLOYS BEST TECHNOLOGY AS AVAILABLE
 - USES COMMERCIALY AVAILABLE TECHNOLOGY AND SERVICES
 - IS RESPONSIVE TO RANGE OF THREATS

UNCLASSIFIED

THE OMNCS BELIEVES THAT THE PANEL'S RECOMMENDED PROGRAM IS VERY COST EFFECTIVE PARTICULARLY IN LIGHT OF THE FAVORABLE PERFORMANCE CHARACTERISTICS OF THE PROPOSED APPROACH COMPARED TO THE FORMER NLP. THE OMNCS ESTIMATES A REDUCTION IN COST OF 40% FOR THE 5 YEAR NLP PROFILE (FY93-97) AND A 49% REDUCTION IN THE 10 YEAR LIFE CYCLE COST ESTIMATE.

UNCLASSIFIED

**RESTRUCTURED NATIONAL
LEVEL PROGRAM (U)**



(Classified Slide Showing Performance and Cost)

UNCLASSIFIED

THE NLP PROVIDES FOR CAPABILITY ENHANCEMENTS IN FIVE BASIC AREAS AS LISTED BELOW. EACH AREA WILL BE DISCUSSED IN TURN IN THE EXHIBITS WHICH FOLLOW.

UNCLASSIFIED



RESTRUCTURED NATIONAL LEVEL PROGRAM (U)

CAPABILITY AREAS

- ACCESS
- SIGNALING
- ROUTING
- PRIORITY TREATMENT
- TRANSMISSION AUGMENTATIONS

UNCLASSIFIED

IN THE AREA OF ACCESS, THE PROGRAM PROVIDES FOR:

THE EXPANSION OF THE NATIONAL DIALING PLAN USING THE 710 "AREA CODE" IN AT&T, MCI, AND US SPRINT TO PROVIDE FOR NS/EP CALL RECOGNITION AND SPECIAL TREATMENT.

THE USE OF FTS2000 AND DSN FOR DIRECT ACCESS, WHERE AVAILABLE, IN ADDITION TO REGULAR PSN ACCESS THROUGH THE LOCAL EXCHANGE CARRIER NETWORK.

THE USE OF PERSONAL IDENTIFICATION NUMBERS (PINS) FOR ACCESS CONTROL USING DISTRIBUTED DATA BASES IN AT&T, US SPRINT, AND MCI.

THE USE OF CELLULAR TECHNOLOGIES AND ALTERNATIVE ACCESS PROVIDERS WHERE AVAILABLE TO NS/EP USERS.

UNCLASSIFIED



RESTRUCTURED NATIONAL LEVEL PROGRAM (U)

ACCESS TO NS/EP TELECOMMUNICATION CAPABILITIES

- NATIONAL DIALING PLAN (710) FOR NS/EP CALL RECOGNITION
- FTS2000 AND DEFENSE SWITCHED NETWORK DIRECT ACCESS WHERE AVAILABLE
- ACCESS CONTROL THROUGH NS/EP USER PERSONAL IDENTIFICATION NUMBERS (DISTRIBUTED DATA BASE)
- WIRELESS TECHNOLOGIES (CELLULAR) AND ALTERNATIVE ACCESS PROVIDERS AVAILABLE TO NS/EP USERS

UNCLASSIFIED

IN THE AREA OF SIGNALING, THE PROGRAM PROVIDES FOR:

THE CONTINUATION OF THE SURVIVABLE SIGNALING NETWORK WITHIN AT&T.

THE EXTENSION OF SURVIVABLE SIGNALING CAPABILITIES FOR INTERFACING WITH THE EVOLVING SIGNALING NETWORKS OF THE LOCAL EXCHANGE CARRIERS.

UNCLASSIFIED



RESTRUCTURED NATIONAL LEVEL PROGRAM (U)

SURVIVABLE SIGNALING CAPABILITIES FOR NS/EP CALLS

- ROBUST SIGNALING NETWORK FOR NS/EP CALLS WITHIN AT&T NETWORK
- EXTENSION OF ROBUST SIGNALING CAPABILITIES INTO LOCAL EXCHANGE CARRIER NETWORKS

UNCLASSIFIED

IN THE AREA OF NS/EP ROUTING, THE PROGRAM PROVIDES FOR:

THE USE OF SPECIAL ROUTING OPTIONS AVAILABLE TO NS/EP CALLS WITHIN INTEREXCHANGE NETWORKS AND TO INTERNATIONAL GATEWAYS. THESE ROUTING ENHANCEMENTS INCLUDE ROBUST NONHIERARCHICAL ROUTING (RNHR) AND AN NS/EP VERSION OF REAL TIME NETWORK ROUTING IN AT&T AND A EXPANSION OF THESE TYPES OF CAPABILITIES INTO MCI AND US SPRINT.

UNCLASSIFIED



**RESTRUCTURED NATIONAL
LEVEL PROGRAM (U)**

NS/EP ROUTING CAPABILITIES

- SPECIAL ROUTING OPTIONS AVAILABLE TO NS/EP CALLS WITHIN LONG DISTANCE NETWORKS AND TO INTERNATIONAL GATEWAYS

UNCLASSIFIED

IN THE AREA OF PRIORITY TREATMENT, THE PROGRAM PROVIDES FOR:

THE USE OF CENTREX SERVICES AVAILABLE AT ACCESS TANDEM SWITCHES TO PROVIDE PRIORITY TRUNK QUEUING FOR ACCESS TO AVAILABLE NETWORK RESOURCES ON THE INTEREXCHANGE NETWORK SIDE OF THE ACCESS TANDEM SWITCH. (THE USE OF THE CENTREX FEATURES PROVIDES A SIGNIFICANT COST SAVINGS COMPARED TO THE PREVIOUS NETS APPROACH BECAUSE THE CENTREX APPROACH DOES NOT REQUIRE EXPENSIVE TRUNK RESERVATION.)

THE EXEMPTION FROM RESTRICTIVE NETWORK MANAGEMENT CONTROLS LIKE CODE BLOCKING.

THE USE OF PRIORITY DIAL TONE SERVICES TO PROVIDE MORE RAPID ACCESS TO DIAL TONE UNDER CONDITIONS OF LOCAL SWITCH CONGESTION.

UNCLASSIFIED



RESTRUCTURED NATIONAL LEVEL PROGRAM (U)

NS/EP PRIORITY TREATMENT CAPABILITIES

- USE OF CENTREX SERVICES (TRUNK QUEUING) TO ALLOW PRIORITY ACCESS TO AVAILABLE NETWORK RESOURCES
- EXEMPTION FROM RESTRICTIVE NETWORK MANAGEMENT CONTROLS
- USE OF PRIORITY DIAL TONE SERVICES

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IN THE AREA OF TRANSMISSION AUGMENTATION, THE PROGRAM PROVIDES FOR:

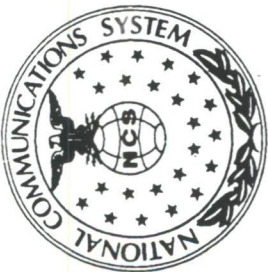
THE CONTINUATION OF THE CSI PROGRAM WITH A RECONFIGURATION OF SOME ASSETS TO INCORPORATE MCI AND SPRINT IN THE CSI NETWORK.

THE CONTINUATION OF THE CARRIER INTERCONNECT PORTION OF THE CNS PROGRAM TO SELECTIVELY AUGMENT CONNECTIVITY BETWEEN LOCAL EXCHANGE AND INTEREXCHANGE CARRIER NETWORKS.

THE CONTINUATION OF THE MOBILE TRANSPORTABLE TELECOMMUNICATIONS (MTT) PORTION OF THE CNS PROGRAM USING MILITARY TACTICAL COMMUNICATIONS EQUIPMENT.

THE USE OF CELLULAR NETWORKS TO PROVIDE DIRECT ACCESS (WHEN APPROPRIATE) TO THE INTEREXCHANGE NETWORKS AS A PART THE CNS PROGRAM.

UNCLASSIFIED



RESTRUCTURED NATIONAL LEVEL PROGRAM (U)

NS/EP TRANSMISSION AUGMENTATIONS

- AUGMENTED LONG DISTANCE NETWORK CONNECTIVITY USING COMMERCIAL SATELLITE ASSETS (CSI)
- AUGMENTED CONNECTIVITY BETWEEN LOCAL AND LONG DISTANCE NETWORKS USING LEASED LINES (CNS)
- USE OF DEPLOYABLE RADIO EQUIPMENT, SUCH AS MILITARY TACTICAL COMMUNICATIONS EQUIPMENT (CNS)
- STUDIES UNDERWAY FOR AUGMENTING CELLULAR NETWORK CONNECTIVITY (CNS)

UNCLASSIFIED

THIS EXHIBIT SUMMARIZES THE PROPOSED FUNDING REVISION TO THE FY93 NLP AND
COMPARES IT TO THE JUNE, 1991 VERSION OF THE FY93 NLP.

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**FISCAL YEAR 1993 NLP PREVIOUS
AND REVISED FUNDING (\$000) (U)**



TOTAL

	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
FY93 NLP PREVIOUS	18,803	55,693	73,416	92,800	90,600	94,819
FY93 NLP REVISED	18,803	34,555	53,033	59,224	57,058	61,527

IMPLEMENTATION/
RECURRING

	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
FY93 NLP PREVIOUS	8,812	46,223	63,926	84,583	82,077	86,007
FY93 NLP REVISED	8,812	16,150	33,451	41,647	49,163	53,331

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UNDER THE CURRENT FUNDING ALGORITHM, DOD AND FEMA SHARE FUNDING OF
NLP IMPLEMENTATION/RECURRING COSTS ON A 70% DOD AND 30% FEMA BASIS. DOD
PROVIDES ALL OF THE PRE-IMPLEMENTATION COSTS.

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DoD/FEMA SHARED FUNDING (\$000) (U)

AGENCY	FY93		FY94	
	Pre-Imp	Imp/Rec	Pre-Imp	Imp/Rec
DoD	18,405	11,305	19,582	23,416
TOTAL	29,710		42,998	

AGENCY	FY93		FY94	
	Imp/Rec	Imp/Rec	Imp/Rec	Imp/Rec
FEMA	4,845			10,035

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THIS EXHIBIT SHOWS THE MAJOR MILESTONES FOR THE ACQUISITION OF THE NEW PROGRAM. OF SPECIAL NOTE IS THE EARLY OPPORTUNITY FOR COP INPUT INTO THE DEVELOPMENT OF THE SPECIFICATIONS AND STATEMENT OF WORK IN DECEMBER OF THIS YEAR.

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RESTRUCTURED NATIONWIDE EMERGENCY TELECOMMUNICATIONS SERVICE MILESTONES (U)



MAJOR PROGRAM MILESTONES	PLANNED DATES					
	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
Statement of Work and Specifications to COP	△ ₁					
Draft RFP to Government and Industry	△ ₂					
RFP Release		△ ₃				
Proposals Due		△ ₄				
Best And Final Offer			△ ₂			
Integration Contract Award				△ ₄		
IOC					△ ₂	
FOC						△ ₄

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THE RECOMMENDATION OF THE MANAGER, NCS IN REGARD TO THE FY93 NLP IS
SHOWN BELOW.

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RECOMMENDED NATIONAL LEVEL PROGRAM (U)

THE MANAGER, NCS, RECOMMENDS THAT THE FOLLOWING
BE APPROVED:

- A. CONTINUED FUNDING OF THE CSI PROGRAM FOR PLANNING,
ENGINEERING, AND IMPLEMENTATION.
- B. REVISED FUNDING FOR THE CNS PROGRAM FOR PLANNING,
ENGINEERING, AND IMPLEMENTATION.
- C. NEW FUNDING PROFILE FOR THE RESTRUCTURED NETS
PROGRAM. THIS PROGRAM IS SUBJECT TO FURTHER REVIEW
AND COMMENT BY THE COMMITTEE OF PRINCIPALS PRIOR TO
CONTRACT AWARD, AND REVIEW AND APPROVAL BY THE
EXECUTIVE OFFICE OF THE PRESIDENT.

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THE COP STRONGLY ENDORSED THE MANAGER'S RECOMMENDATION THROUGH THE
MOTION REPRODUCED BELOW.



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NCS COMMITTEE OF PRINCIPALS RESPONSE (U)

THE COP RECOMMENDS THAT THE POLICY COORDINATING
COMMITTEE ON NATIONAL SECURITY TELECOMMUNICATIONS
AND INFORMATION SYSTEMS APPROVE THE REVISED FISCAL
YEAR 1993 NATIONAL LEVEL PROGRAM

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BASED ON THE WORK OF THE PANEL OF EXPERTS AND THE OMNCS, AND WITH THE
RECOMMENDATION OF THE COMMITTEE OF PRINCIPALS, THE MANAGER REQUESTS
THAT THE PCC APPROVE PROCEEDING WITH THE RECOMMENDED PROGRAM.

ALSO REQUEST THAT OMB ISSUE FISCAL YEAR 1993 BUDGET GUIDANCE FOR THE
NATIONAL LEVEL PROGRAM.

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REQUESTED PCC ACTIONS (U)

- APPROVE THE MANAGER, NCS, PROCEEDING WITH HIS RECOMMENDED PROGRAM
- OMB ISSUE FISCAL YEAR 1993 BUDGET GUIDANCE FOR THE NATIONAL LEVEL PROGRAM

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