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Central Intelligence Agency
Office of the Deputy Director for Intelligence

2 APR 1986

DDI- 01689/86

NOTE TO: DCI

The attached contains background and talking points for your welcoming remarks to the joint CIA/AIAA Symposium to be held in the Auditorium on 8-9 April 1986. Also attached are brochures on relevant subjects that we intend to give to the participants.

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Robert M. Gates
DDI

8:45 - 9:00 - 8 April

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DCI Talking Points
CIA/American Institute of Aeronautics and Astronautics
Conference on Soviet Threat Technology
Tuesday, 8 April 1986
CIA Headquarters Auditorium

1. The Soviets are pursuing an ambitious, large-scale military Research, Development, Test, and Evaluation (RDT&E) program. They are producing an increasing number of highly capable, innovative, and cost-effective weapons and related systems that will present a growing challenge to US researchers and designers of offensive and defensive systems. The fruits of the extensive Soviet program are outlined to some extent in two documents which all of you have--the 1986 version of SOVIET MILITARY POWER and CIA's Congressional testimony of last year on Soviet strategic force developments. As the pace of technology developments quickens, Intelligence Community inputs to and interaction with US RDT&E community will necessarily become increasingly important.

2. This symposium fills a need that is not met by any other program. Although other AIAA sponsored meetings are held at the SECRET/NOFORN level, none covers the broad range of military technologies that this does; further, none covers the state of Soviet developments. The classification level allows an exchange of information that goes beyond open literature surveys, and the inclusion of Intelligence Community speakers gives authority to the discussions. We hope to expand on many of the areas of Soviet military progress that are detailed in SOVIET MILITARY POWER and the Congressional testimony reprint. Indeed, one of those who testified, Dr.

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Larry Gershwin, my National Intelligence Officer for Strategic Programs, will be one of your speakers. The wide-ranging technical dialogue we expect to come out of this symposium is needed between the engineers and scientists in the Intelligence Community and those in the defense RDT&E community (our principal audience).

3. This classified symposium will provide to a large and important audience a greater appreciation and understanding of Soviet technological advances and innovations. Many of these are the result of, or were hastened by, the Soviet acquisition of Western technology, both hardware and information. The vast Soviet effort to acquire the "best of the west" is outlined in the White Paper, SOVIET ACQUISITION OF MILITARILY SIGNIFICANT WESTERN TECHNOLOGY: AN UPDATE, which we also have provided for you. One of the lectures will be on this most important aspect of Soviet threat technologies. The speaker will be , who is currently the Director of the Office of Scientific and Weapons Research, and who once led CIA's Technology Transfer Assessment Center.

4. Not to be overlooked in the dialogue we hope to engender is the possibility for 'reverse' tech transfer. The work of Soviet engineers and scientists in many of the areas to be addressed in the symposium may merit consideration by US laboratories and defense industries. This is something you can tell us.

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5. Determining the nature and scope of foreign scientific and technical developments is challenging, perhaps one of the most challenging assignments for an engineer or scientist. The men and women with these backgrounds who follow science, technology, and weapons at CIA and the other agencies of the Intelligence Community are among the best. Only by getting the best together--those from industry, academia, and the government--can the US hope to come up with timely, effective, and affordable responses to the Soviet challenge. That's why we are all here together.

6. Today, your program is focused on subjects critical to our maintaining the balance of strategic forces which is threatened by the new, more accurate, and mobile missiles which the Soviets began to deploy last year and will be deploying between now and the mid-nineties. This balance is also threatened by the additional missile defenses they are capable of deploying during that same period.

7. After looking over the roster of you who are visiting our headquarters, I'd like to mention a couple of additional concerns on which we would like to tap the range of knowledge and experience in industry, academia, think tanks and of technologies represented here today.

8. When the President made the speech which was quickly labeled "Star Wars," he stressed the prospect of applying emerging technologies to developing conventional defenses, as well as strategic defense, which could offset effective, and perhaps obsolete, the preponderance of tanks, planes and guns held today by the Warsaw Pact forces. Indeed, if and when effective strategic defense emerges to reduce the nuclear threshold and balance of terror, more effective conventional defenses will be needed to maintain the overall balance.

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9. Also, it is not news to you that we face today a new form of aggression in state terrorism as an instrument of power. We are already seeing international terrorism as a war without boundaries, and at the same time rapidly becoming more technologically proficient. Last Saturday, the Secretary of State had a dozen scientists in for a four-hour session on what technology can do to enhance our conventional defense and counter-terrorism, as well as our intelligence and strategic capabilities. A lot of thought and work is needed there. Clearly it cannot be accomplished without the kind of support that the people in this room can provide.

10. With those quick thoughts about our future agenda, I will let you turn to your very full two-day schedule. I hope you are able to take the time to see some of our campus and facilities. If you have any questions about the Agency or our work, please ask your CIA hosts. Another of the brochures we have for you explains the type of work our analysts do, the backgrounds we look for, and the careers in intelligence analysis that are available - careers that we think make a difference. I hope you enjoy the next two days here at CIA as well as find them stimulating and informative.

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7 April 1986

MEMORANDUM FOR: Director of Central Intelligence

STAT
FROM:

Director of Scientific and Weapons Research

SUBJECT: AIAA Conference Agenda and Attendees

1. Attached is the agenda and list of attendees for the joint AIAA/CIA Conference on Tuesday and Wednesday. The attendees are, for the most part, senior analysts, marketers, and mid-level managers in the defense sector.

2. I am sorry I could not have provided this to you when you called Saturday. The official list of attendees has been maintained at the AIAA headquarters.

3. Total attendance will be about 500--400 paying participants through the AIAA and about 100 free from the Intelligence Community.

4. As you can well imagine, a conference this size requires a lot of administrative effort. We have been pleased and impressed with the DDA's "can-do" attitude in making this conference possible.

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Attachments: a/s

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First Day Schedule

Tuesday, April 8, 1986

A.M.
 6:15 First bus departs Tysons Westpark Hotel
 7:00-8:30 Registration
 8:30 **Opening Comments**
 John J. Bertin
 University of Texas at Austin
 STAT 8:45 **Welcoming Remarks**
 William J. Casey
 Director of Central Intelligence
 9:00 **I. Soviet Design and Procurement Philosophy**
 Richard Ward
 General Dynamics/Ft. Worth
 10:00-10:30 Coffee break
 10:30 **II. Aircraft and Cruise Missiles**
 Joseph Sacksteder
 Foreign Technology Division
 Wright Patterson Air Force Base
 11:30 **III. Soviet Naval Capability**
 Robert Webber
 Naval Surface Weapons Center
 STAT P.M.
 STAT 12:30-1:45 Lunch
 1:45 **IV. Tactical Missiles**
 M. Leroy Spearman
 Langley Research Center
 National Aeronautics and Space Administration
 2:45 **V. Strategic Missiles**
 Defense Intelligence Agency
 Pentagon
 STAT 3:45-4:15 Coffee break
 STAT 4:15-5:15 **VI. Soviet Strategic Reentry Vehicle Technology**
 Office of Scientific and Weapons Research
 Central Intelligence Agency

Second Day Schedule

Wednesday, April 9, 1986

A.M.
 7:00 First bus departs Tysons Westpark Hotel
 8:30 **VII. Soviet Ballistic Missile Defense**
 Lawrence K. Gershwin
 NIO for Strategic Programs
 9:30 **VIII. Soviet Directed Energy Weapons R&D**
 Office of Scientific and Weapons Research
 Central Intelligence Agency
 10:30-11:00 Coffee break
 11:00 **IX. Space Systems**
 E. Kenneth McDavid
 Foreign Technology Division
 Wright Patterson Air Force Base
 P.M.
 12:30-1:45 Lunch
 1:45 **X. Technologies for Chemical Weapons**
 A staff member of the Life Sciences Branch
 Office of Scientific and Weapons Research
 Central Intelligence Agency
 STAT 2:45 **XI. Science and Technology, and Technology Transfer**
 Director
 Office of Scientific and Weapons Research
 Central Intelligence Agency
 3:45-4:15 Coffee break
 4:15-5:15 **XII. Technology and Arms Control**
 A staff member of the Arms Control Intelligence Sta.
 Central Intelligence Agency
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SOVIET THREAT TECHNOLOGY
CENTRAL INTELLIGENCE AGENCY

LANGLEY, VIRGINIA

APRIL 8-9, 1986

<u>NAME</u>	<u>COMPANY/ADDRESS</u>	<u>MEMBER</u>	<u>NON-MEMBER</u>	<u>PAID</u>
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1 APR 1986

MEMORANDUM FOR: Director of Central Intelligence
VIA: Deputy Director for Intelligence
FROM:
Director of Scientific and Weapons Research
SUBJECT: Talking Points for Opening Remarks to Joint CIA/AIAA
Symposium

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1. ACTION: None. Per your request, we have attached talking points for your welcoming remarks to the joint CIA/AIAA symposium on Soviet threat technologies. Also attached are copies of four brochures relevant to the subject of the symposium that we plan to give to all participants. The information below is background material on the symposium.

2. BACKGROUND: The SOVIET THREAT TECHNOLOGY SYMPOSIUM to be held at CIA Headquarters 8-9 April 1986 is the second SECRET/NOFORN conference on this subject to be sponsored by the American Institute of Aeronautics and Astronautics (AIAA). The first was held in April 1985 at Sandia National Laboratories in Albuquerque, New Mexico. For that conference, the AIAA invited eight speakers to talk on Soviet capabilities, major accomplishments, problems and future directions in a variety of military systems. CIA made two presentations. The meeting was attended by about 350 professionals from U.S. Government agencies (DoD, DoE, etc), defense contractors, national laboratories, and academic institutions. The responses received through AIAA Headquarters, Sandia National Laboratories, and OSWR were overwhelmingly positive and complimentary. The response was a clear indication that this type of classified forum filled a need for regular exchanges of information about Soviet threat technologies.

3. Late last year, Dr. John Bertin, Professor of Aerospace Engineering at the University of Texas and a Regional Director of the AIAA, requested that CIA host and co-sponsor the second symposium. The subject certainly was relevant to our mission, and, with the DDI's approval, we agreed. The program for the April symposium here at Headquarters has been expanded to a full two days with a total of 12 speakers. (The Graphics Design Center will print the final program.) The content of all presentations is once again restricted to SECRET/NOFORN. We are expecting close to 400 non-CIA attendees at this meeting.

**SUBJECT: Talking Points for Opening Remarks to Joint CIA/AIAA
Symposium**

4. The Offices of Logistics and Security have been most helpful to us in planning for the symposium. The North Cafeteria has changed its normal operations for the two days and will serve a special buffet luncheon for the participants. We plan to show several short films about advanced technologies and the Agency during breaks. We also will have copies of the attached brochures for the participants' retention--the Tech Transfer White Paper; the 1986 version of Soviet Military Power; a reprint of the unclassified Congressional testimony of the DDI and NIO/SP on Soviet Strategic Force Developments; and the pamphlet on DI careers.) A brief walking tour of the first floor areas is scheduled after hours on the first day.

STAT



**Attachments:
as stated**

SOVIET STRATEGIC FORCE DEVELOPMENTS

TESTIMONY BEFORE A JOINT SESSION OF THE SUBCOMMITTEE
ON STRATEGIC AND THEATER NUCLEAR FORCES OF THE
SENATE ARMED SERVICES COMMITTEE

AND

THE DEFENSE SUBCOMMITTEE OF THE SENATE COMMITTEE ON APPROPRIATIONS

JUNE 26, 1985

BY

ROBERT M. GATES
CHAIRMAN, NATIONAL INTELLIGENCE COUNCIL, AND
DEPUTY DIRECTOR FOR INTELLIGENCE
CENTRAL INTELLIGENCE AGENCY

LAWRENCE K. GERSHWIN
NATIONAL INTELLIGENCE OFFICER FOR STRATEGIC PROGRAMS
NATIONAL INTELLIGENCE COUNCIL

I. Introduction

By the mid-1990s, nearly all of the Soviets' currently deployed intercontinental nuclear attack forces--land- and sea-based ballistic missiles and heavy bombers--will be replaced by new and improved systems. New mobile intercontinental ballistic missiles (ICBMs) and a variety of cruise missiles are about to enter the force. The number of deployed strategic force warheads will increase by a few thousand over the next five years, with the potential for greater expansion in the 1990s. We are concerned about the Soviets' longstanding commitment to strategic defense, including an extensive program to protect their leadership, their potential to deploy widespread defenses against ballistic missiles, and their extensive efforts in directed-energy weapons technologies, particularly high-energy lasers. Their vigorous effort in strategic force research, development, and deployment is not new, but is the result of an unswerving commitment for the past two decades to build up and improve their strategic force capabilities.

Soviet leaders are attempting to prepare their military forces for the possibility that they will actually have to fight a nuclear war. They have seriously addressed many of the problems of conducting military operations in a nuclear war, thereby improving their ability to deal with the many contingencies of such a conflict.

We judge that the Soviets would plan to conduct a military campaign that would seek to end a nuclear war on their terms--by neutralizing the ability of US intercontinental and theater nuclear forces to interfere with Soviet capabilities to prevail in a conflict in Eurasia.

II. Strategic Offensive Forces

The most notable recent trend in offensive forces is the construction of bases for mobile strategic missiles--SS-20 intermediate-range ballistic missiles (IRBMs) and new ICBMs:

- During 1984, the Soviets embarked on an unprecedented program for constructing new SS-20 bases, starting more new bases than in any previous year.
- The Soviets have made major strides in preparing for the deployment of their two new mobile ICBMs--the road-mobile SS-X-25 and the rail-mobile SS-X-24. The Soviets' commitment to deploy mobile ICBMs represents a major resource decision; such systems require substantially more support infrastructure than do silo-based systems, and thus are much more costly to operate and maintain.

All elements of Soviet strategic offensive forces will be extensively modernized by the mid-1990s, as the result of programs that have been in train for many years. While the Soviets will continue to rely on fixed, silo-based

ICBMs, mobile ICBMs will be deployed in large numbers (see figure 1), and major improvements will be made to the sea-based and bomber forces. The major changes in the force will include:

- An improved capability against hardened targets. The Soviets already have enough hard-target-capable ICBM reentry vehicles today to attack all US ICBM silos and launch control centers and will have larger numbers of hard-target-capable RVs in the future. In such an attack today, they would stand a good chance of destroying Minuteman silos. The projected accuracy improvements for the new heavy ICBM we expect the Soviets to deploy in the late 1980s would result in a substantial increase in this damage capability.
- Significantly better survivability from improvements in the submarine-launched ballistic missile (SLBM) force--through quieter submarines and longer range missiles--and deployment of mobile ICBMs. Today, a large part of the Soviet silo-based ICBM force would survive an attack by US forces. However, with the increasing vulnerability of Soviet ICBM silos in the next ten years if more accurate US missiles are deployed, the Soviets will increasingly depend on the survivability of their mobile ICBM and SLBM forces.
- A substantial increase in the number of deliverable warheads for the bomber force as a result of the deployment of new bombers with long-range, land-attack cruise missiles.

ICBMs

Chart 1 shows new Soviet strategic ballistic missiles, land- and sea-based, and submarines--those recently deployed or now in testing and those we expect to see tested over the next five years.

The ICBM force, as shown in figure 2, will have been almost entirely replaced with new systems by the mid-1990s:

- The Soviets are preparing to deploy the SS-X-24 ICBM in silos in 1986 and on rail-mobile launchers in 1987. We expect SS-X-24-class ICBMs equipped with 10 multiple independently targetable reentry vehicles (MIRVs) to replace the MIRVed SS-17 and SS-19 silo-based ICBMs, which carry fewer warheads.
- The Soviets have started to retire older silo-based single-RV SS-11s as they prepare to deploy the single-RV road-mobile SS-X-25. We expect the SS-X-25 to be operational by late 1985.
- We expect at least three new ICBMs will be flight-tested in the 1986-90 time period:
 - A new silo-based heavy ICBM, to replace the SS-18.
 - A new version of the SS-X-24.

- A new version of the mobile SS-X-25, which could have a MIRVed payload option.

SS-20s

The SS-20 force of intermediate-range ballistic missiles is expected to expand to over 450 deployed launchers by 1987, as a result of an extensive program of constructing new bases. More new bases were started in 1984 than in any previous year. The total would have been considerably higher if the Soviets had not deactivated SS-20 bases in the central USSR to convert to SS-X-25 ICBM bases. A follow-on to the SS-20, which also carries three warheads and is probably designed to improve lethality, began flight-testing in 1984.

SLBMs

An extensive modernization program will result in replacement of the entire MIRVed Soviet SLBM force and deployment of much better nuclear-powered ballistic missile submarines (SSBNs). The major changes, as shown in figure 3, will include:

- Deployment of Delta-IV and additional Typhoon SSBNs. These boats have improvements that will contribute to their survivability. In addition, a new class of submarines is likely to enter the force in the early 1990s.
- Deployment of the new SS-NX-23 SLBM beginning in late 1985 or early 1986 on Delta-IVs and on Delta-IIIs. The increased range of the SS-NX-23, relative to that of the SS-N-18 missile currently on Delta-IIIs, will make SS-NX-23-equipped SSBNs more survivable because they will be able to operate closer to Soviet shores, where the Soviet Navy can better protect them.
- A replacement for the SS-N-20 on Typhoon SSBNs will probably be flight-tested in late 1985 or 1986, and a missile in the SS-NX-23 class will probably be tested later in the 1980s.

Heavy Bombers

Chart 2 shows new Soviet strategic bombers and a variety of new long-range, land-attack cruise missiles.

The Soviet heavy bomber force is undergoing its first major modernization since the 1960s; by the mid-1990s, as shown in figure 4, most of the older bombers will have been replaced. The heavy bomber force will have a greater role in intercontinental attack:

- The AS-15 air-launched cruise missile (ALCM) became operational on newly produced Bear H aircraft in 1984. By using newly produced aircraft of an old design, the Soviets were able to deploy ALCMs at least four years earlier than if they had waited for the new Blackjack bomber.

--We project Blackjack will be operational in 1988 or 1989, carrying both ALCMs and bombs.

Cruise Missiles

The ALCM is the first in a series of deployments of long-range, land-attack cruise missiles. Over the next 10 years, we expect them to deploy 2,000 to 3,000 nuclear-armed ALCMs, sea-launched cruise missiles (SLCMs), and ground-launched cruise missiles (GLCMs). The deployment of cruise missiles provides the Soviets with new multidirectional capabilities against US targets.

Growth of Intercontinental Attack Forces

The projected growth in the number of deployed warheads on Soviet intercontinental attack forces, under various assumptions, is shown in figure 5:

- The force currently consists of over 9,000 deployed warheads on some 2,500 deployed ballistic missile launchers and heavy bombers. Most warheads are in the ICBM force.
- Warheads are increasing: new Soviet Typhoon and Delta-IV submarines, Bear H bombers, and SS-X-24 ICBMs will carry many more warheads than the systems they are replacing.
- By 1990, if the Soviets continue to have about 2,500 missile launchers and heavy bombers and if they are within the quantitative sublimits of SALT II, the deployed warheads will grow to over 12,000.
- The 1983 Soviet proposal at the strategic arms reduction talks (START) would also result in an expansion in the number of warheads, although under its limits the Soviets would have about 1,000 fewer by 1990 than under SALT II limits.
- The effect of the 1983 US START proposal would be to reverse this trend and, by the 1990s, lead to substantial reductions.
- While the Soviets would not necessarily expand their intercontinental attack forces beyond some 12,000 to 13,000 warheads in the absence of arms control constraints, they clearly have the capability for significant further expansion, to between 16,000 and 21,000 deployed warheads by the mid-1990s. The lower figure represents a continuation of recent trends in deployment rates; the upper figure is not a maximum effort but would require a substantially greater commitment of resources.

The Soviets will face important decisions in the next few years, as they proceed with flight-testing the ballistic missiles which are scheduled to begin deployment in the late 1980s and early 1990s. (See Chart 1) Specifically, they have technical options to test new ICBMs in such a way as to conform with, or exceed, the limitations on characteristics and improvements in the unratified SALT II Treaty.

III. Strategic Defense

Soviet active and passive strategic defenses, while unable to prevent large-scale damage from a major attack, are intended to provide a degree of protection for the leadership, military, and military-related facilities necessary for wartime operations. The Soviets will significantly improve the capabilities of their strategic defenses over the next 10 years, as a number of new types of weapons are introduced and many of the older systems retired. Significant developments include the following:

Ballistic Missile Defense

- The Soviets have actively engaged in antiballistic missile (ABM) research, development, and deployment programs for many years.
- When completed by about 1987, the improved Moscow ABM system will consist of 100 silo-based high acceleration missiles and modified Galosh interceptors, providing an improved intercept capability against small-scale attacks on key targets around Moscow.
- By the end of the decade, when a new network of large phased-array radars (including the Krasnoyarsk radar) is expected to be fully operational, the Soviets will have a much improved capability for ballistic missile early warning, attack assessment, and accurate target tracking. These radars will be technically capable of providing battle management support to a widespread ABM system, but there are uncertainties about whether the Soviets would rely on these radars to support a widespread ABM deployment.
- The SA-X-12 system, to be deployed in the Soviet ground forces in 1985-86, can engage conventional aircraft, cruise missiles, and tactical ballistic missiles. It could have capabilities to intercept some types of US strategic ballistic missile RVs. Its technical capabilities bring to the forefront the problem that improving technology is blurring the distinction between air defense and ABM systems. This problem will be further complicated as newer, more complex air defense missile systems are developed.

We are particularly concerned that the Soviets' continuing development efforts give them the potential for widespread ABM deployments. The Soviets have the major components for an ABM system that could be used for widespread ABM deployments well in excess of ABM Treaty limits. The components include radars, an aboveground launcher, and the high acceleration missile that will be deployed around Moscow. The potential exists for the production lines associated with the upgrade of the Moscow ABM system to be used to support a

widespread deployment. We judge they could undertake rapidly paced ABM deployments to strengthen the defenses at Moscow and cover key targets in the western USSR, and to extend protection to key targets east of the Urals, by the early 1990s. In contemplating such a deployment, however, the Soviets will have to weigh the military advantages they would see in such defenses, against the disadvantages of such a move, particularly the responses by the United States and its Allies.

Air Defense

Deployment of new low-altitude-capable strategic air defense systems will increase. (See figure 6.) The Soviets are continuing to deploy the new SA-10 all-altitude surface-to-air missile (SAM), are deploying new aircraft with much better capabilities against low-flying targets, and will deploy the Mainstay airborne warning and control system (AWACS) aircraft in 1985. Penetration of Soviet air defenses by currently deployed bombers would be more difficult as improved systems are deployed. These defenses, however, would be considerably less effective against US cruise missiles. Against a combined attack of penetrating bombers and cruise missiles, Soviet air defenses during the next 10 years probably would not be capable of inflicting sufficient losses to prevent large-scale damage to the USSR. We judge, however, that the Soviets will be able to provide an increasingly capable air defense for many key leadership, control, and military and industrial installations essential to wartime operations.

Antisubmarine Warfare

The Soviets still lack effective means to locate US ballistic missile submarines at sea. We expect them to continue to pursue vigorously all antisubmarine warfare (ASW) technologies as potential solutions to the problems of countering US SSBNs and defending their own SSBNs against US attack submarines. We are concerned about the energetic Soviet ASW research and technology efforts. However, we do not believe there is a realistic possibility that the Soviets will be able to deploy in the 1990s a system that could pose any significant threat to US SSBNs on patrol.

Leadership Protection

The Soviets have a large program to provide protection for their leadership. We judge that, with as little as a few hours' warning, a large percentage of the wartime management structure would survive the initial effects of a large-scale US nuclear attack. We estimate there are at least 800, perhaps as many as 1,500, relocation facilities for leaders at the national and regional levels. Deep underground facilities for the top national leadership might enable the top leadership to survive--a key objective of their wartime management plans.

IV. Command and Control Considerations

While significant improvements in the capabilities of both Soviet and US strategic offensive forces will occur throughout the next 10 years, sizable forces on both sides would survive large-scale nuclear strikes. The Soviets' confidence in their capabilities for global conflict and in their ability to limit damage to the Soviet Union would be affected to a large extent by command and control considerations--the need for continuity in their own command and control capabilities, and their prospects for disrupting and destroying the ability of the United States and its Allies to command and to operate their forces.

- Although US attacks could destroy many known fixed command, control, and communications facilities, the Soviets' emphasis in this area has resulted in their having many key hardened facilities and redundant means of communications; thus, it seems highly likely that the Soviets could maintain overall continuity of command and control, although it would probably be degraded and they could experience difficulty in maintaining endurance.
- We believe the Soviets would launch continuing attacks on US and Allied strategic command, control, and communications to try to prevent or impair the coordination of retaliatory strikes, thereby easing the burden on Soviet strategic defenses, and impairing US and Allied abilities to marshal military and civilian resources to reconstitute forces. While the Soviets would devote substantial efforts to this mission, they probably are not confident that they could accomplish these objectives.

V. Space Program

The vigorous Soviet space program is predominantly military in nature. More than 70 percent of Soviet space missions are for military purposes only, with much of the rest serving a dual military-civil function. The Soviets view space as an integral part of their overall offensive and defensive force structure, not as a separate arena or as a sanctuary. While the Soviets seek to be able to deny enemy use of space in wartime, current Soviet antisatellite capabilities are limited and fall short of meeting this apparent requirement. Today, in addition to the dedicated nonnuclear orbital interceptor, other systems--the nuclear Galosh ABM interceptor and two ground-based high-energy lasers--have the potential to destroy or interfere with some satellites in near-Earth orbit, but the potential threat to satellites in higher orbit is limited. It is likely that the Soviets would attempt to destroy or interfere with US satellites during an intense conventional conflict, and in the initial stages of a nuclear war. These capabilities, however, would not survive a nuclear attack. Some improvements in Soviet antisatellite capabilities are expected.

VI. Directed-Energy and Hypervelocity Kinetic-Energy Weapons

Directed-energy and kinetic-energy weapons potentially could be developed for several strategic weapons applications--antisatellite (ASAT), air defense, battlefield use, and, in the longer term, ballistic missile defense (BMD).

There is strong evidence of Soviet efforts to develop high-energy laser weapons, and these efforts have been taking place, in some cases, since the 1960s:

- We estimate a laser weapon program of the magnitude of the Soviet effort would cost roughly \$1 billion per year if carried out in the United States.
- Two facilities at the Saryshagan test range are assessed to have high-energy lasers with the potential to function as ASAT weapons.
- We are concerned about a large Soviet program to develop ground-based laser weapons for terminal defense against reentry vehicles. There are major uncertainties, however, concerning the feasibility and practicality of using ground-based lasers for BMD. We expect the Soviets to test the feasibility of such a system during the 1980s, probably using one of the high-energy laser facilities at Saryshagan. An operational system could not be deployed until many years later, probably not until after the year 2000.
- The Soviets appear to be developing two high-energy laser weapons with potential strategic air defense applications--ground-based and naval point defense.
- The Soviets are continuing to develop an airborne laser.
- Soviet research includes a project to develop high-energy laser weapons for use in space. A prototype high-energy, space-based laser ASAT weapon could be tested in low orbit in the early 1990s. Even if testing were successful, such a system probably could not be operational before the mid-1990s.

The Soviets are also conducting research under military sponsorship for the purpose of acquiring the ability to develop particle beam weapons (PBWs). We believe the Soviets will eventually attempt to build a space-based PBW, but the technical requirements are so severe that we estimate there is a low probability they will test a prototype before the year 2000.

The Soviets are strong in the technologies appropriate for radiofrequency (RF) weapons, which could be used to interfere with or destroy components of missiles or satellites, and we judge they are probably capable of developing a prototype RF weapon system.

We are concerned that Soviet directed-energy programs may have proceeded to the point where they could construct operational ground-based ASAT weapons.

The Soviets have expended significant resources since the 1960s in R&D on technologies with potential applications for hypervelocity kinetic-energy weapons.

VII. Resources for Projected Developments and Arms Control Considerations

Strategic offensive and defensive forces account for about one-fifth of total defense spending--about one-tenth each. The Soviets are increasing their resource commitments to their already formidable strategic forces research, development, and deployment programs. We estimate that total investment and operating expenditures for projected Soviet strategic offensive forces (intercontinental attack and intermediate range) and strategic defensive forces (assuming no widespread ABM deployments) will result in a growth in total Soviet strategic force expenditures of between 5 and 7 percent a year over the next five years. (The rate would be 7 to 10 percent if widespread ABM defenses were deployed.)

A growth rate of 5 to 7 percent a year for strategic programs, combined with the projected growth rate for nonstrategic programs of about 3 percent, would lead to a growth in total defense spending of between 3 and 4 percent per year--at the same time that we foresee sluggish growth in the Soviet economy for the rest of the decade. Increasing the share of the GNP devoted to defense will confront the Soviets with the difficult choice of reducing the growth in investment, which is critical to modernizing the industrial base, or curtailing growth in consumption, which is an important factor in the Soviet drive to improve labor productivity.

Despite serious economic problems since the mid-1970s, Soviet military procurement has been at high annual levels; in particular, the Soviets have continued to procure large quantities of new strategic weapons. Since the mid-1970s, for example, the Soviets fielded their MIRVed ICBM force, and then improved it; deployed the MIRVed SLBM force on new SSBNs; and deployed their mobile SS-20 force. In recent years the Soviets have increased their resource commitments to emerging new systems, particularly with respect to the deployment of costly mobile missile systems.

While Soviet economic problems are severe, we see no signs that the Soviets feel compelled to forgo important strategic programs or that they will make substantial concessions in arms control in order to relieve economic pressures. Soviet force decisions and arms control decisions are likely to continue to be driven by calculations of political-strategic benefits and the dynamism of weapons technology. We judge that strategic forces will continue to command the highest resource priorities and therefore would be affected less by economic problems than any other element of the Soviet military. We believe, however, that, as a result of the stark economic realities, decisions involving the rate of strategic force modernization probably will be influenced by economic factors more now than in the past and some deployment programs could be stretched out.

We believe the Soviets are determined to prevent any erosion of the military gains the USSR has made over the past decade. They recognize that new US strategic systems being deployed or under development will increase the threat to the survivability of their silo-based ICBM force, complicate their

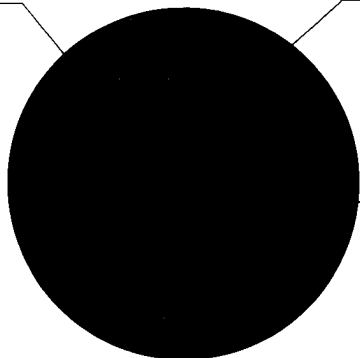
ASW efforts, and present their air defense forces with increasingly complex problems. By their actions and propaganda, the Soviets have demonstrated they are very concerned about the US Strategic Defense Initiative (SDI) and its focus on advanced technology. In their view, it could force them to redirect their offensive ballistic missile development programs to reduce vulnerabilities or could stimulate a costly, open-ended high-technology competition for which they probably are concerned that the United States can outpace their own ongoing efforts. They are probably also concerned that SDI will lead to a sustained US effort in strategic defenses.

Soviet leaders view arms control policy as an important factor in advancing their strategy of achieving strategic advantage. They have been willing to negotiate restraints on force improvements and deployments when it served their interests. Moscow has long believed that arms control must first and foremost protect the capabilities of Soviet military forces relative to their opponents. The Soviets seek to limit US force modernization through both the arms control process and any resulting agreements. A salient feature of Soviet arms control policy will be its emphasis on trying to limit US ballistic missile defense and space warfare capabilities. The Soviets will try to use arms control discussions as a means of delaying or undercutting the US SDI program.

Figure 1
Soviet Intercontinental Attack Forces,
Warhead Mix

1985

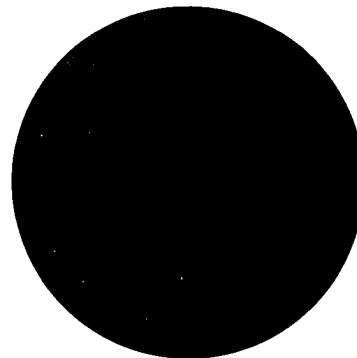
ICBMs



SLBMs

Bombers

Mid-1990s

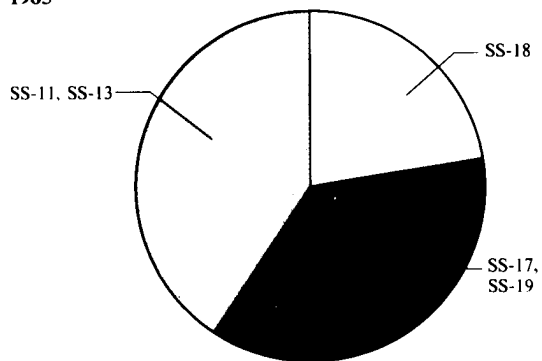


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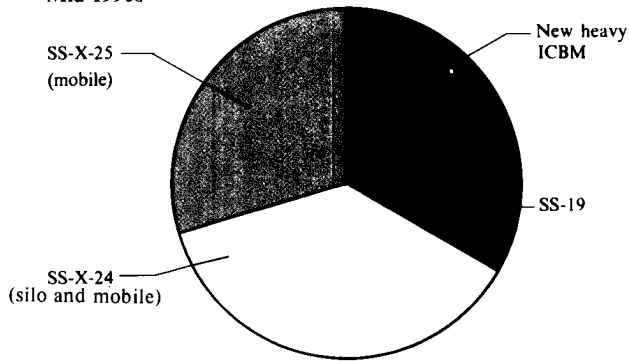
Figure 2
Modernization of Soviet ICBMs

Launchers

1985

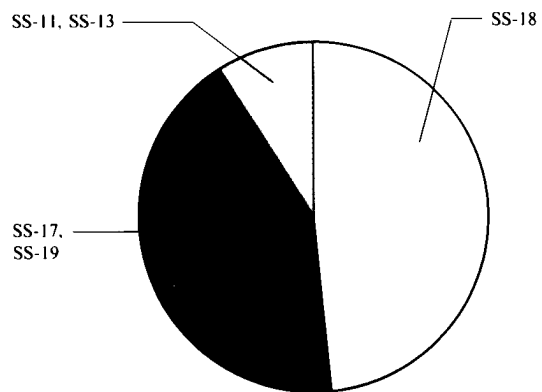


Mid-1990s



Warheads

1985



Mid-1990s

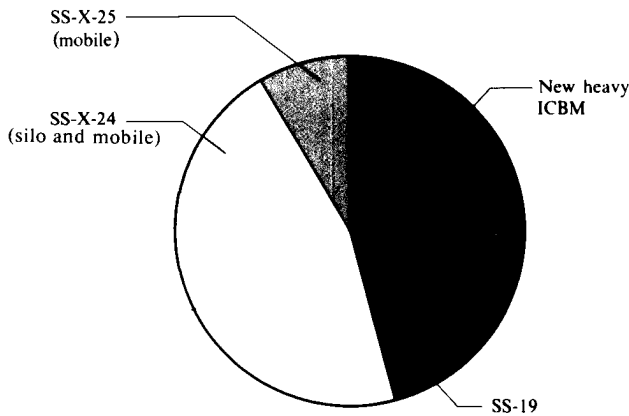
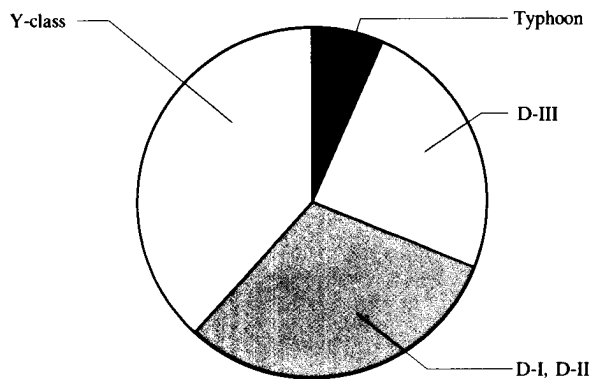


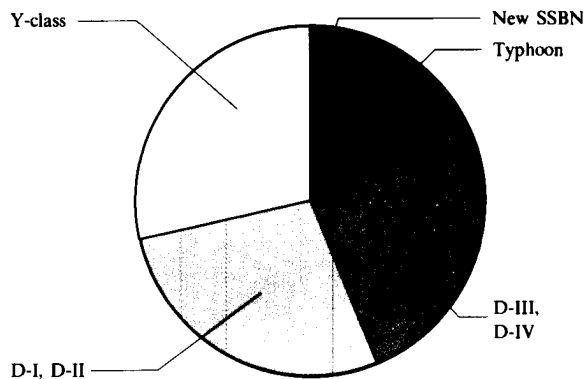
Figure 3
Modernization of Soviet SLBMs

Launchers

1985

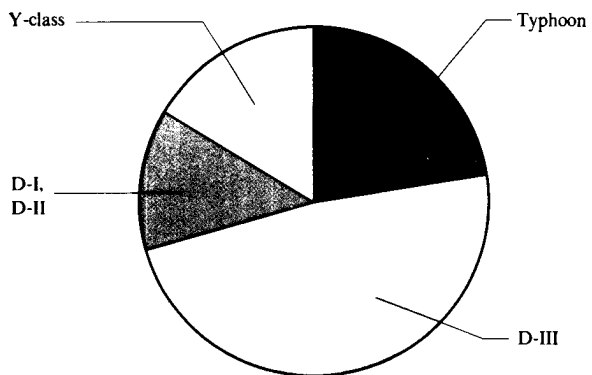


Mid-1990s

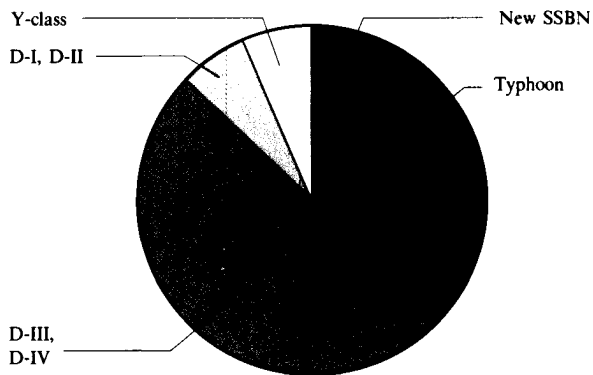


Warheads

1985



Mid-1990s

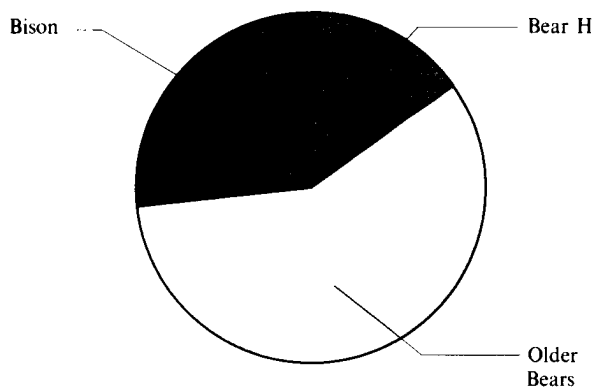


Note: Color changes for D-III and Typhoon in the mid-1990s indicate new missiles deployed in existing submarine classes.

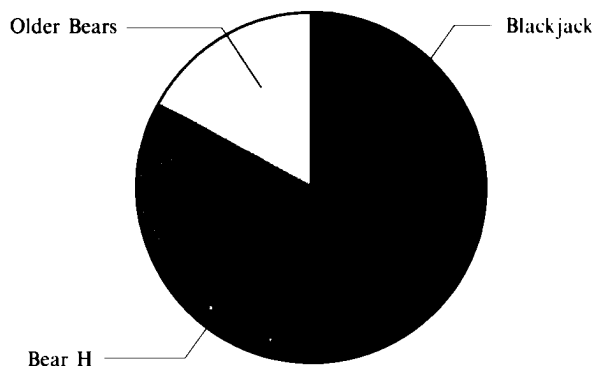
Figure 4
Modernization of Soviet Heavy Bombers

Heavy Bombers

1985

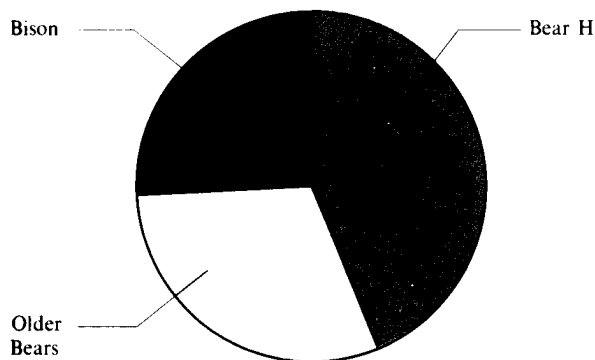


Mid-1990s



Heavy Bomber Weapons

1985



Mid-1990s

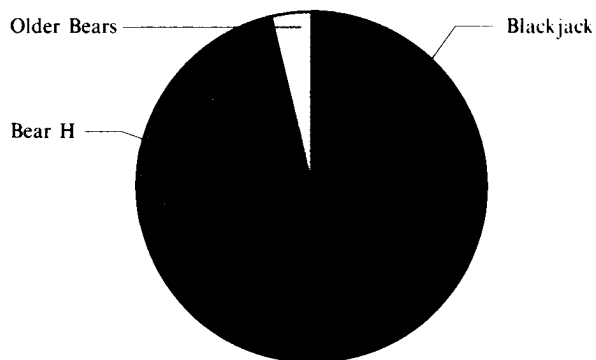


Figure 5
Growth in Number of Deployed Warheads on Soviet Strategic Intercontinental Attack Forces

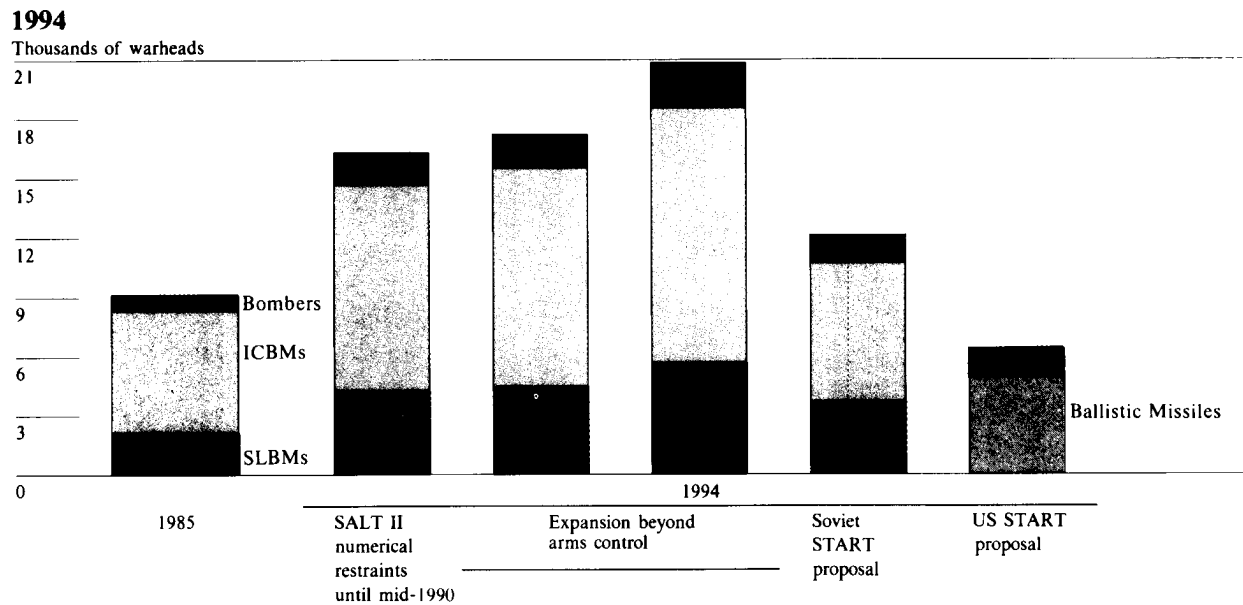
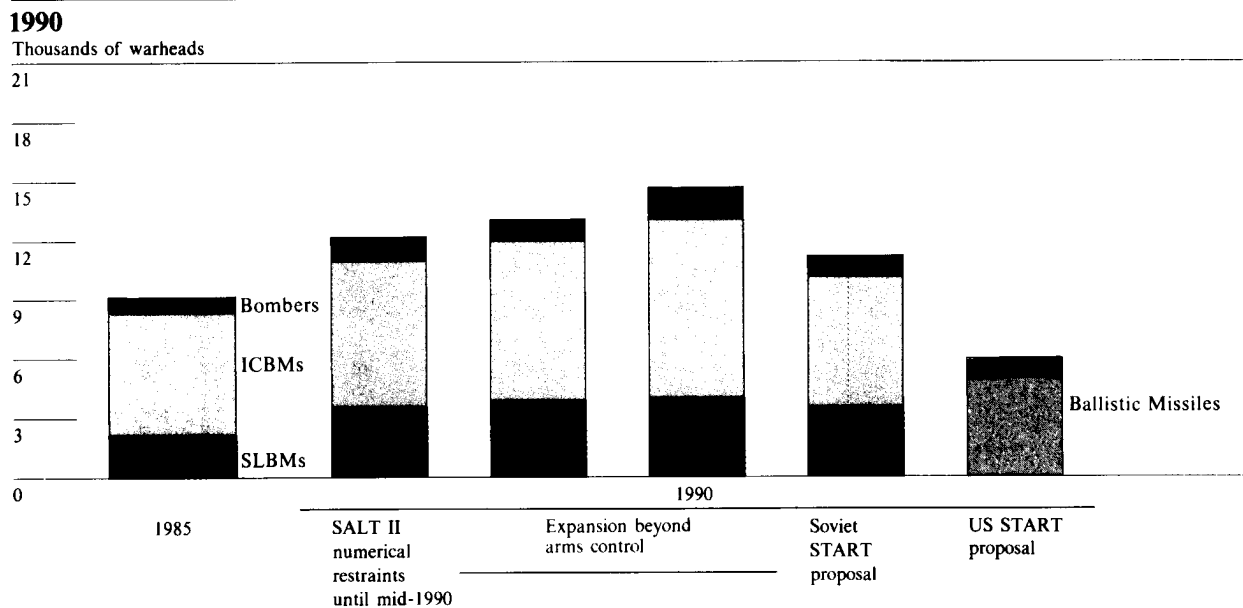


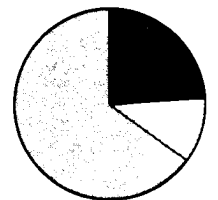
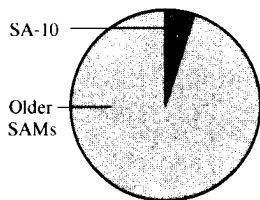
Figure 6
Modernization of Soviet Strategic
Air Defense Forces

Strategic SAMs

Launchsites

1985

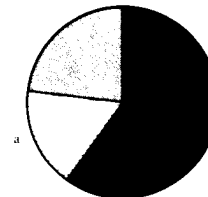
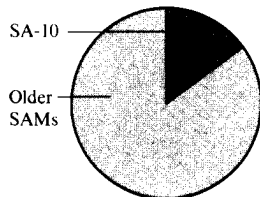
Mid-1990s



Launch Rails

1985

Mid-1990s

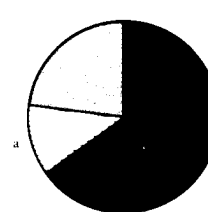
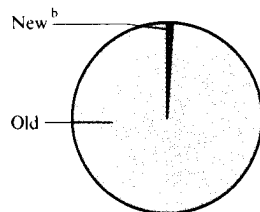


Air Defense Interceptors

Military District Aviation

1985

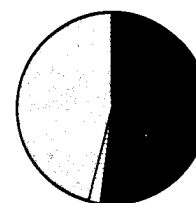
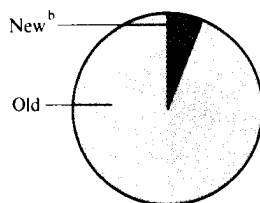
Mid-1990s



Air Defense District Aviation

1985

Mid-1990s



^a Represents different assumptions about our projections of modernization.
^b New interceptors are: Foxhound, Fulcrum, Flanker, long-range interceptor.

Chart I: New Soviet Strategic Ballistic Missiles

Recently Deployed or in Testing

To be Tested 1986-90

SS-X-24



ICBM

SS-X-25



ICBM

SS-20
Follow-on



IRBM

SS-18
Follow-on



ICBM

SS-X-24
Follow-on



ICBM

SS-X-25
Follow-on



ICBM

SS-N-20



SLBM

SS-NX-23



SLBM

SS-N-20
Follow-on



SLBM

SS-NX-23
Follow-on



SLBM

Typhoon SSBN



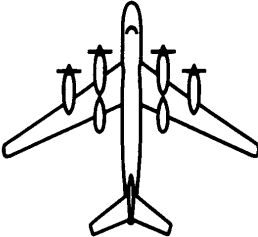
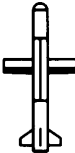

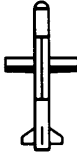
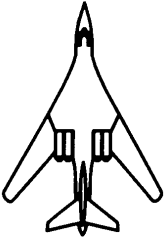
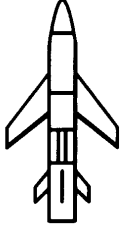

D-IV SSBN



New SSBN



Chart II: New Soviet Strategic Bombers and Cruise Missiles

Bombers	Long-Range Cruise Missiles		
<u>Bear H</u>	<u>AS-15</u>	<u>SS-NX-21</u>	<u>SSC-X-4</u>
			
<u>Blackjack</u>	<u>SS-NX-24</u>		
			
	SLCM, GLCM	New SSGN	

Directorate of Intelligence Central Intelligence Agency



Careers that can make a difference.

A professional career with new horizons

As a member of the Directorate of Intelligence, you can make vital contributions to the nation.

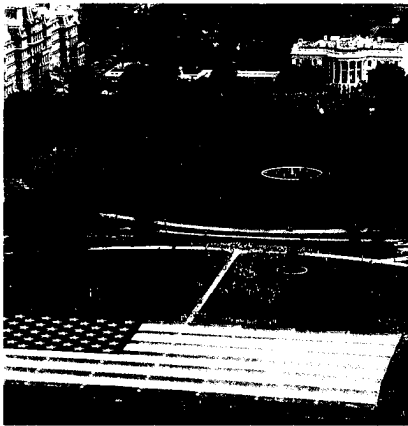
You will be asked to work at the leading edge of your professional field with colleagues who are dedicated to supporting senior policymakers with the best possible intelligence.

Consequently, the Directorate of Intelligence offers you a unique opportunity to build a satisfying career. And we back you with state-of-the-art technology and equipment, access to vast sources of information available nowhere else, continued training and education, travel and assignments in foreign lands and contact with leading experts in your own field in this country and abroad, as well as interaction with experts in related fields.

In joining our organization's quest to understand and to explain a highly complex, ever-shifting, and often confusing world, your assignments will be highly meaningful . . . to you and the United States. We emphasize the ability to think for yourself, to think creatively, and to exercise sound judgment.

The Directorate of Intelligence (DI) is the analytical arm of the CIA.

The Directorate of Intelligence is one of the four major components of the Central Intelligence Agency. The other three directorates of the CIA are responsible for developing and operating technical collection systems, for collecting foreign intelligence information and carrying out intelligence activities abroad, and for providing administrative and support services. In this brochure, however, we want to tell you about the special role of the Directorate of Intelligence, or "DI," as we know it.



The DI supports the President and other leading policymakers.

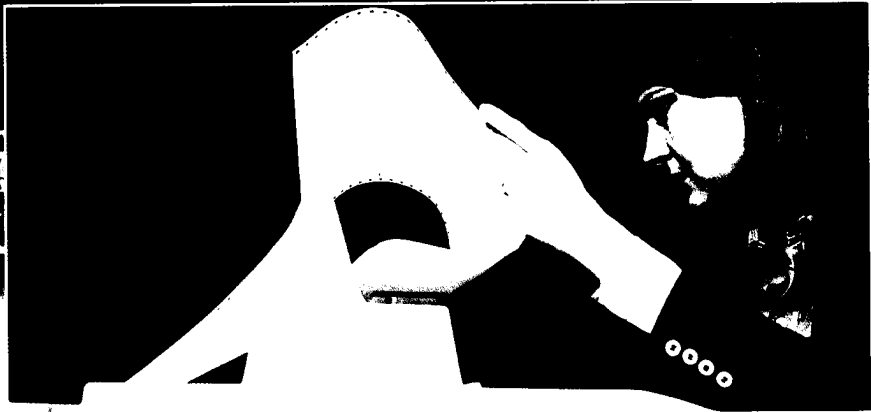
The role of the CIA's Directorate of Intelligence is to analyze and interpret foreign intelligence information for our nation's leaders. Those who formulate and carry out the foreign policies of the United States rely heavily on foreign intelligence information that is integrated, analyzed, and produced by our component. These national policymakers include the President of the United States, the Secretaries of State and Defense, other key members of the President's Cabinet, and members of the National Security Council.

Our task in the DI, then, is to provide timely, accurate, and comprehensive intelligence information of vital importance to the US policymaker and to the security of our nation. In organizing and presenting the facts and in assessing their implications, we take particular pride in objective analysis and reporting. We can do this because we are not responsible for making policy decisions or for advocating one policy over another.

But you can be sure that your thinking and judgment can influence the direction of significant decisions at the highest levels of our government.

What is meant by intelligence production?

Intelligence production involves the conversion of raw information into "finished intelligence." It includes the integration, evaluation, and analysis of data from all available sources and the preparation of a variety of intelligence products. Such products or estimates may be presented as briefings, daily, weekly, or monthly publications, concise *ad hoc* reports, or comprehensive, in-depth studies and assessments.



This conversion is not a simple process. It requires careful thought and patience. The raw information is often fragmentary, complex, and, at times, contradictory. DI analysts, who specialize in various subjects or particular areas of the world, must exercise sound judgment. They also must be able to present their findings clearly and concisely, both orally and in writing. Because of the urgency and importance of the tasks at hand, our analysts frequently have to respond to short deadlines.

conduct multidisciplinary analysis of all countries and topics within their particular areas of responsibility. By placing together political, economic, and military analysts working on the same country or geographic area, these offices not only foster broad area specialization among analysts but also ensure that every analytical discipline will be involved in intelligence assessments from inception to publication.

There are also five functional offices in the DI: the Offices of Global Issues, Current Production and Analytic Support, Scientific and Weapons Research, Imagery Analysis, and Central Reference.

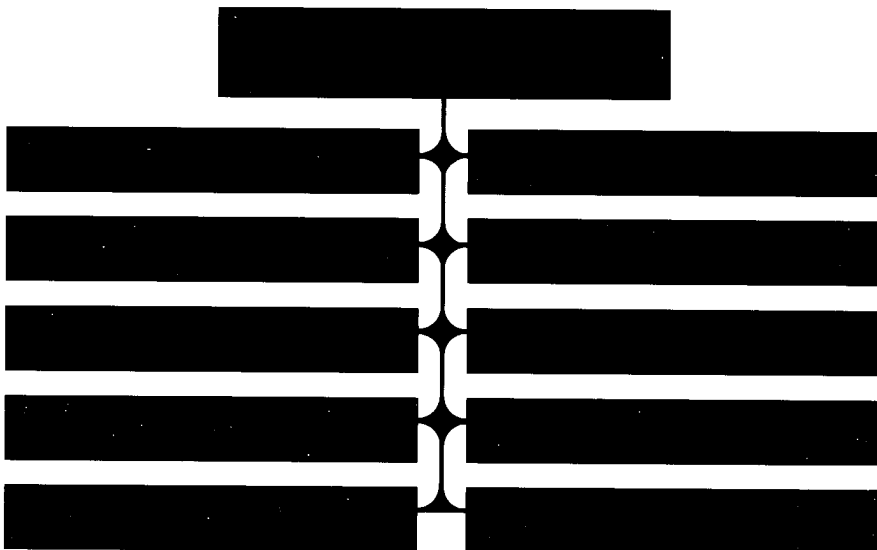
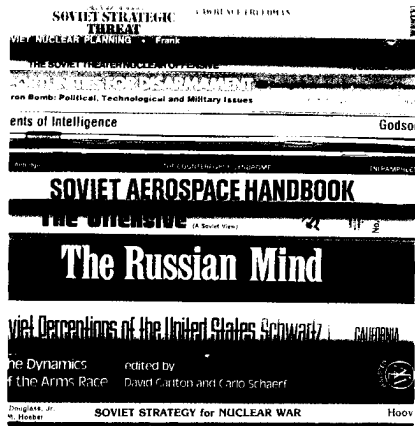
The Office of Global Issues analyzes international economic, geographic, and technological issues as well as special topics such as terrorism, narcotics, weapons transfers, and political instability.

The Office of Current Production and Analytic Support publishes all DI intelligence reports and produces CIA maps, charts, and specialized graphics for use in CIA reports and briefings and for the White House. It also manages the CIA's 24-hour Operations Center.

How we are organized.

The subjects with which our analysts work are many and varied. They may concern different countries, regions, problems, or personalities in a variety of contexts: political, geographic, economic, military, scientific, sociological, or biographic. Accordingly, we concentrate our research and analytical efforts on particular areas and cultures as well as specific disciplines. To achieve these objectives, the Directorate of Intelligence is organized along both regional and functional lines.

There are five regional offices: the Offices of African and Latin American, East Asian, Near East and South Asian, Soviet, and European Analysis. These offices



The Office of Scientific and Weapons Research assesses the technical capabilities of foreign weapons and space systems. It also studies technology transfer, nuclear weapons/energy, and scientific and technological developments on a worldwide basis.

The Office of Imagery Analysis produces intelligence assessments and in-depth reports, based on photography and other sources.

The Office of Central Reference produces biographic intelligence, provides reference services, and operates map, document, and open literature libraries.

An Analytic Support Group assists these regional and functional offices with computerized programs and advanced methodologies. This group provides ADP training and consultative assistance to DI analysts. It identifies and develops advanced quantitative methods to enhance analyst effectiveness and productivity.

In addition, the Directorate of Intelligence has staff elements involved in arms control intelligence, the development of intelligence collection requirements, product evaluation, planning and management. It also participates actively — often providing the leadership — in various interagency intelligence committees.

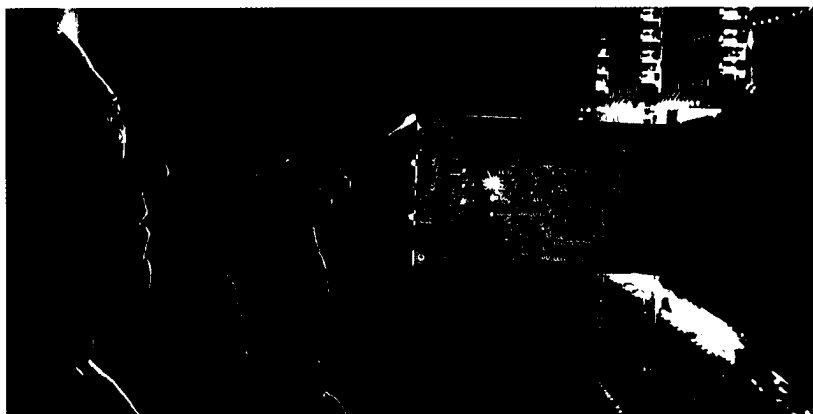
It should be noted that the DI is a dynamic organization subject to continuing refinement as new issues emerge and as the needs of the President and other policymakers expand or change.

You can advance rapidly . . . and will enjoy many benefits.

There are several factors that promote your personal and professional advancement at the Directorate of Intelligence:

- Promotions are competitive and based on your accomplishments. You are given additional responsibilities as soon as you are ready to assume them.

- You can select the career direction you prefer. You may specialize in one field or subject, expand your professionalism to cover several fields, or concentrate on developing managerial skills. And you may switch career directions as your career progresses and your interests change.
- You will be working on important projects at the leading edge of your field of interest.
- Direct contact with senior US officials and policymakers is an important part of your job.
- You will associate with senior experts in your field, not only at the CIA but in other government agencies, in universities, and in private industry.
- You get unequalled access to information.
- Some persons who join us directly from college will enter the Career Training Program. The Career Training Program involves intensive training and exposure to all aspects of CIA's mission. Those selected for this special training ultimately will be able to move on to positions of leadership with a broader and keener understanding of the Agency.
- To bolster your thinking power and talents, we support graduate study, provide various training courses throughout your career, and offer opportunities for sabbaticals.



- As part of your ongoing training, you can expect to travel in foreign countries and have the opportunity for assignments abroad (although willingness to serve abroad is not a requirement in the DI).
- We seek to offer you the best career benefits found in both academic institutions and private industry at salaries that are comparable to those in private industry.
- CIA is not part of the Civil Service (even though our general rules, pay, and benefits are patterned after those of the Civil Service).

When you join the Directorate of Intelligence, you will be given opportunities and levels of challenge seldom found elsewhere.

You work for the President of the United States and national leaders.

You interact with the highest echelons in the US Government in two ways.

First, the results of your research and analysis are presented to these leaders and form part of the foundation on which they make national policy decisions.

Second, some of your assignments will be in direct response to requests issued by these leaders, who seek the information needed to arrive at intelligent decisions.

Thus, your work is exceptionally important.

The resources at your command are unique.

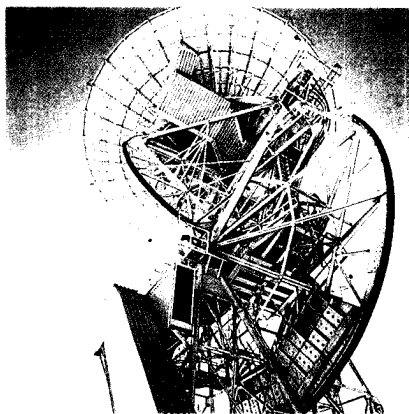
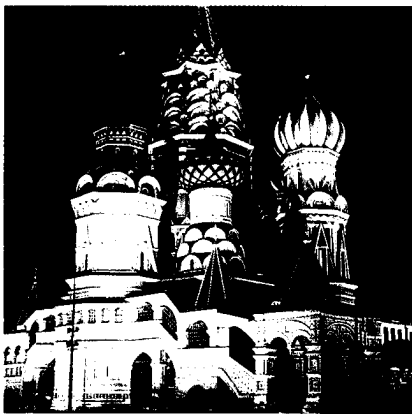
Sophisticated research and analysis demands that you start with complete information on the issue at hand. Here, our organization has unique capabilities to provide and secure what you need.

You will, of course, obtain information from published works, the media, academic contacts, and other government agencies in this country. Then, we will back you with the capabilities of our Central Reference Office, which include an extensive and valuable store of data as well as computer access to our own data banks and other data banks throughout the nation. We also place at your fingertips the computer support and power necessary to do the job right. And when the information you need is not available by conventional means, we have unique capabilities to secure it through clandestine collection and by advanced technical means . . . anywhere in the world.

Naturally, we cannot guarantee to give you complete information on every issue. Often you will have only some of the pieces to the puzzle and some of these will be incomplete or sketchy. But this often makes your challenge even more interesting. And you can be sure you are getting the most complete information from the best sources in the world. Ultimately, however, the quality of your product and your own success will depend on your analytical ability, intelligence, imagination, and insight.

The emphasis is on continued education and training.

You learn on the job by tackling increasingly more demanding projects and through interaction with senior colleagues and national leaders in your profession. But you also increase your knowledge and capability by formal training. We encourage and support advanced study at universities, and we offer you a wide range of specialized



courses given in the DI. This emphasis on self-improvement is not limited to the early years of your association with us. Economists on our staff, for example, typically spend more than 10 percent of their time on formal studies throughout their careers.

As part of this training, you may travel in or be assigned to work in foreign nations in order to give you firsthand knowledge and familiarization. However, your primary duty station will be in our professional offices in the Washington, DC metropolitan area.

Where we work . . .

The CIA Headquarters is located in suburban Virginia, only seven miles from Washington, DC. Its location offers you a variety of choices of where to live. You may choose to reside in the countryside, in the city of Washington, or in the adjacent suburbs of Virginia or Maryland. Each location has its own amenities to suit your tastes.

As the nation's capital, Washington, DC offers something of everything for everyone. Noted as one of the most beautiful cities in the country, Washington is a highly cosmopolitan area, home to embassies from almost every country in the world. It has more parks than any other major American city, and the many sidewalk cafes, the quaint, pebbled streets of Georgetown, and the sparkling monuments add to the international flavor of this city. Cultural, historical, and sports activities abound . . . and the seashore or mountains are but a few hours away.

Challenging positions are available in many disciplines.

The Directorate of Intelligence employs a wide diversity of disciplines and experience. So, if you have a bachelor's, master's degree or a doctorate, the chances are very good that we can offer you an interesting career. We are interested in meeting

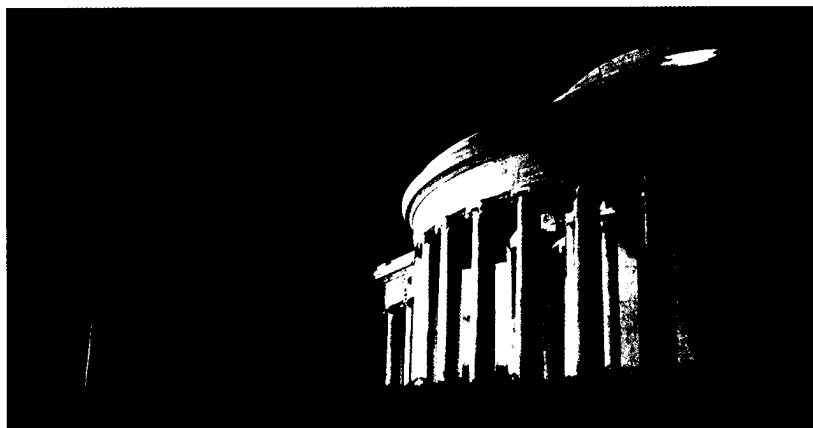
with both experienced professionals and recent college graduates.

To qualify for a position with the Directorate of Intelligence, you must be a native US citizen or a naturalized citizen for at least five years. If you are married, there is a similar requirement that your spouse has, or is acquiring, US citizenship.

Following, you will find a list of the disciplines used by the Directorate of Intelligence. Career opportunities in several of these disciplines are detailed on subsequent pages.

- Agronomy
- Anthropology
- Architecture
- Behavioral Science
- Cartography
- Chemistry
- Communications
- Computer Science
 - operations
 - programming
 - systems analysis
- Demography
- Economics
 - agricultural
 - area
 - econometrics
 - finance
 - general
 - industrial
 - international
- Engineering
 - aeronautical
 - aerospace
 - electrical
 - electronic

- general
- industrial
- mechanical
- nuclear
- Foreign Area Studies
- Geography
- Graphic Design/Illustrating
- History
- Imagery Analysis
- International Relations
- Journalism
- Languages
- Library and Documentation Sciences
- Life Sciences
- Mathematics
- Medicine
- Military Analysis
- Photogrammetry
- Physics
- Political Science
- Sociology



Career opportunities in Economic Research and Analysis

Economic events anywhere in the world can be of interest and concern to the Directorate of Intelligence.

We are engaged in economic research and analysis on the economies of foreign countries as well as on global issues such as those concerning international trade, monetary development, and the international commodity markets.

The wide scope of our activities gives a broad dimension to the career opportunities we offer the economist. But there are several other unique factors that are also worthy of your consideration.

You must be able to write and speak well — to explain exceedingly complex economic issues clearly and concisely, so that a person with limited knowledge of economics can readily understand.

Most of your reports will be in written form, but it is possible on occasion for even a junior economist to be invited to the White House — for

example, to give oral briefings to members of the National Security Council.

The opportunities to find job satisfaction and professional recognition are evident.

You work in an interdisciplinary environment.

The Directorate of Intelligence employs economists who are generalists as well as specialists in varied fields including macroeconomics, international trade, international finance, labor and industrial economics, econometrics, and public finance. You will, of course, interact with other economists as you carry out your assignments. However, many of the problems we tackle are so complex that you also will deal with staff members who are experts in political, military, technological, and social disciplines.

This interdisciplinary approach to economics will help stimulate your professional development.

The qualifications you need.

To qualify for an appointment, you should have an M.A. or Ph.D. in economics, although persons with good qualifications at the B.A. level will be considered. You should also possess analytical ability and research skills.

Desirable attributes of lesser importance are knowledge of foreign areas and foreign languages, advanced training in mathematics and automated data processing, and practical industrial or agricultural experience.

If you meet the US citizenship requirement and have these qualifications, we would like to meet with you. Let us hear your career objectives, and we will clarify in detail how well you can reach them at the Directorate of Intelligence.





Career opportunities in

The Physical Sciences and Engineering

Most scientists and engineers at the Directorate of Intelligence are assigned to the Office of Scientific and Weapons Research, whose responsibility is to determine the nature and scope of foreign scientific and technical programs and activities. It also evaluates the performance capabilities of foreign weapons and space systems.

Specific areas of research and analysis include scientific policy, the physical and life sciences, military technology, nuclear energy and weapons, nuclear proliferation, offensive and defensive strategic weapons systems, tactical and general purpose weapons, antisubmarine warfare, space systems, and technology transfer.

Three examples

To further clarify what we do, let us look briefly at three case studies.

An electronic engineer, who is 25 years old and has served on our staff for three years, developed a strong technical understanding of foreign super

computers. He applied this knowledge to potential future energy and weapons systems. He then came up with new and profound concepts of vital significance to our nation. After writing the results of his research, he published his findings and conducted briefings on these subjects at the White House and at other national policymaking organizations.

In another instance, a foreign nation plans to develop a new aircraft. Our multidisciplinary teams will study every aspect of the plane's characteristics, production, and deployment, its impact on United States interests, and how we can best counter this development.

In still another example, a foreign nation gains the technical ability and may have the objective of developing aggressive weapons to be used in space. Our teams ask: "What is the nature of this threat? What American satellites and spacecraft are vulnerable? When? How can we best counter the threat?"

What do these assignments mean to you?

They mean that you work almost exclusively on state-of-the-art technology.

On a worldwide scale.

On issues of profound concern to America's security and economic well-being.

You live and work in the future.

How do our career assignments compare with jobs in private industry?

The primary difference between working for the Directorate of Intelligence and private industry is one of scope. In the DI you are concerned with major technological systems on a worldwide basis.

Corporations are, on the other hand, rarely able to tackle such broad assignments but are usually limited to producing parts of systems or subsystems.

Another difference is found in the support you are given to perform your tasks. A corporation is typically limited by contractual restraints, while the Directorate is equipped with resources appropriate to the importance of its mission. Consequently, we can furnish you with superior support in many areas: clerical, data processing, library services, access to data banks, computer science consultation, professional conferences, and advanced study and training.

It is obvious that these differences will affect your career development and job satisfaction. So, when you take into account that our salaries are competitive with those paid in private industry, you have several compelling reasons for exploring career opportunities at the Directorate of Intelligence.

You will work with leading experts in many disciplines . . . here and abroad.

As part of an interdisciplinary team, you will associate with senior members in your own field . . . plus experts in such disciplines as economics, political science, sociology, and geography.

You will also work with experts in various fields at universities, private companies, and other government agencies who can shed light on problems you are seeking to solve.

And you may interact with your counterparts in the intelligence services of allied nations.

When new and fresh information is needed for your analysis, you may work with operational intelligence specialists who are skilled at obtaining valuable information through clandestine personal contacts in foreign countries and through sophisticated technical means.

The persons you will associate with as a staff member of the Directorate of Intelligence will add an extra dimension to your career.



The Physical Sciences
and Engineering



Career opportunities in

Political Science, History, International Relations, Foreign Area Studies

Political analysts in the Directorate of Intelligence work on some of the most pressing and important foreign issues of the day, from nuclear proliferation, to the future leadership of specific countries, to social and demographic trends. If it affects the interests of the United States, political analysts at CIA are working on it.

Our audience is the most demanding in the world. It includes the President and other senior policy-makers as well as colleagues throughout the US Intelligence Community. As a political analyst and expert in your particular field, you make judgments that will assist our leaders in the decisions they must make.

The job

In its simplest terms, the task of political analysts is to think and write. Our product can be divided into three broad categories. We prepare quick

assessments of fast-breaking situations that are akin to newspaper articles and are written in a matter of hours — for example, the impact on US interests of a sudden *coup d'etat* in an important Third World country. We also do longer, more reflective analyses of events and trends, such as an examination of a particular country's foreign policy or foreign election results. And we write in-depth analyses of specific issues and developments, such as the role of the military in a country's political process.

Career patterns

As a new political analyst, you will be assigned a specific "account" — an intelligence issue or specific country or region — on the basis of your interests and expertise. Under the tutelage of a supervisor and with the assistance of veteran analysts, you will "learn the ropes." Responsibilities and rewards increase as you demonstrate your abilities.

You can work on one area or country during your entire career or you can change, as most analysts do. The choice, however, is yours. All managers are promoted from the ranks; so you also have the option of moving into a supervisory position or rising to become a Senior Analyst.

Education, training and travel

Political analysts bring a solid mastery of their basic discipline with them, but the craft of intelligence analysis is learned on the job. The Directorate of Intelligence will help you acquire the skills and knowledge needed to succeed in your chosen career. There are numerous special courses offered in-house, including language training, to help you become a better analyst, and the Directorate will sponsor and pay for course work at local universities as long as it is related to your job. Foreign travel opportunities are also generous.

Qualifications

A bachelor's or advanced degree in Political Science, International Relations, Area Studies, or the social sciences with a strong academic record is required. Strong written and oral communications skills are essential. The ability to work independently, take the initiative, and meet deadlines is also vital. Language ability, or





Political Sci, History,
Intern. Rel., Foreign Areas



Career opportunities in

Computer Science Applications

Computer science applications at the Directorate of Intelligence focus on harnessing the power of the computer and making it a useful tool in the hands of our analysts. Essentially, we provide the necessary computer consultation for any group within the Directorate. Our tasks may be broadly divided into two areas: data processing and analytical methodology.

Data processing

On the data processing side, we are concerned with storage and retrieval of data, office automation, and data bases, and we train analysts in various disciplines in the use of computer systems.

In office automation, we develop and install systems which include word processing, graphic presentations, electronic mail, and other electronic dissemination of information.

We develop large and small data bases in such a way that analysts can easily and effectively access them for information and thus study different combinations of relationships. In addition to our own data bases, we also access data bases around the nation and around the world.

To create and install useful ADP systems requires knowledge and understanding of computer science as well as awareness of how analysts function. Consequently, we are seeking persons who have a B.A., M.A., or Ph.D. in computer science along with a minor in Statistics, Economics, Political Science, History, or Social Sciences.

Analytical methodology

In analytical methodology we support analysts through four academic disciplines: mathematical statistics, operations research, econometrics, and political methodology.

The mathematical statistician may apply theory to a mass of jumbled data to render it coherent and meaningful. The operations research specialist will, for example, find which of the many possible paths is the most cost-effective way to move oil from the Persian Gulf to the United States. The econometrician helps build mathematical models of foreign economies. The political methodologist, with a background in both mathematics and political science, applies statistical reasoning to political data.

Our work is always original, and we continuously face new challenges that demand high levels of creativity. We continually seek out complex analytical problems and help to develop new and unique ADP solutions in support of DI analysts.

You get state-of-the-art support.

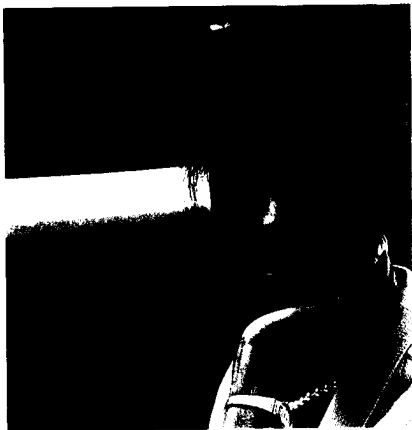
The data processing facilities we place at your fingertips may well be unequalled.

You will have the latest hardware, IBM and IBM compatible, at all times. The serial numbers on our mainframes usually read from 2 to 10. You can log into the systems at any time, there is no need to wait for availabilities at odd hours. And do not worry about storage. You can have all that you need.

We are constantly searching for the latest and best in off-the-shelf applications software. We have whatever packages that are of interest to you as well as many more. Because we test new software for a number of organizations, we can even make packages available to you before they are released to the marketplace.

We also support your personal growth by encouraging attendance at technical conferences and meetings, the publishing of technical papers whenever security permits, and advanced training and education, including paid study leading to Master's and Ph.D. degrees.

The Directorate of Intelligence gives you the tools and the opportunities to advance your computer science career as rapidly and as far as your talents allow.





Computer
Science Applications

Career opportunities for

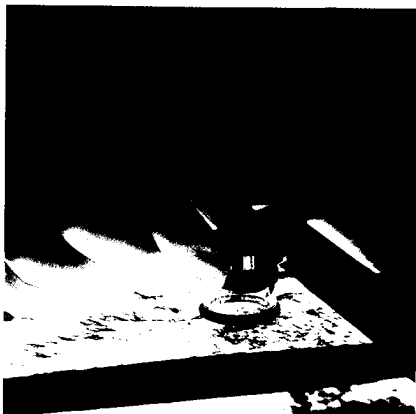
Generalists and Specialists

Imagery Analysis

The field of imagery analysis should be of particular interest to anyone with an undergraduate or graduate degree in the political, social, physical, or earth sciences. We provide both formal and on-the-job training, including an 18-week imagery analysis familiarization course.

The Central Intelligence Agency uses imagery from various reconnaissance systems. As an imagery analyst, you will analyze resulting photographs, derive as much information as possible from them, and then correlate your findings with data from other sources to produce reports of vital importance to our nation's policymakers. Our analysis covers a wide range of subjects, including economic, military, transportation, and industrial studies.

As an imagery analyst, you will participate in an ongoing training and professional development program. You can expect to visit selected US facilities and to exchange ideas with other intelligence specialists. Imagery analysis — in large focus and small — will show you the world.

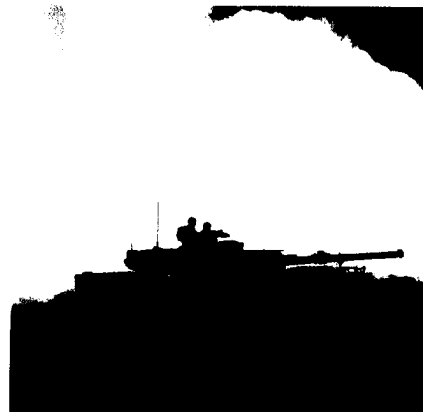


Military Intelligence

Maintaining peace in today's precarious world is a complex and demanding challenge. To meet that challenge, the President of the United States and our other top national policy-makers must have a clear understanding of the military situation around the world. Supplying this understanding is the responsibility of the CIA's military analysts in the Directorate of Intelligence.

If you are a new analyst, joining us directly from college or from another job, we furnish the formal and on-the-job training you need to bring you to the highest level of expertise. Military experience is helpful, but not essential. We are looking for people with an undergraduate or graduate degree in Foreign Area Studies, Political Science, History, International Relations, Economics, Econometrics. We are also looking for people with intellectual curiosity, analytical and research skills, and the ability to write clearly and swiftly on complex subjects. Some of the positions we offer require a strong background in statistics, data processing, or both.

As a military analyst with the DI, you will be part of a multidisciplinary team, working with economic, political, technical, and other military analysts. You will prepare reports on



foreign military programs, activities, capabilities, and intentions. Drawing on extremely sophisticated sources of information, you will conduct research on:

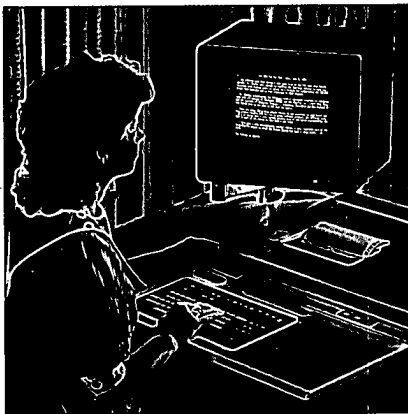
- The organization, development, and doctrine of the military forces of selected countries.
- The relationship between economic resources and military programs.
- The strengths and weaknesses of modern military forces, and their effectiveness under various circumstances.
- Arms control.
- Comparisons of military power in the modern world.
- Insurgency and counterinsurgency.
- Fast-breaking developments in impending wars, primarily in the Third World countries.

In all of these areas, military intelligence is vital in keeping our policymakers informed. As a military analyst, you will make a vital contribution to their understanding.

Information Handling

CIA has information handling positions to:

- Design, develop, and operate sophisticated information and reference facilities for all of CIA.
- Receive and disseminate intelligence reports and publications.
- Provide remote computer access to a large number of information systems.



- Operate special libraries of books, documents, maps, and photographic material.
- Procure publications and maps.

To the librarian, the Directorate of Intelligence offers truly unique career horizons. You will use state-of-the-art technology in the library and information sciences. You will collect information on a global scale, and you will utilize sources of information not available elsewhere. The work is dynamic, demanding, fast paced, and exciting. Your material is read and used, and you watch history being made. Professional positions as Information Resources Officers are available to general liberal arts majors. You will analyze, index, and disseminate intelligence documents. Or you may work in procuring books, and periodicals or maps.

Most librarian positions require a master's degree in library science, but opportunities are also available for geographers, information specialists, and other liberal arts majors with a concentration in foreign area studies, political science, history, or foreign languages. Information science training is highly desirable for all positions. Reading proficiency in one or more foreign languages is a plus.

Geographic Analysis

Every development of foreign policy interest takes place within a geographic context. Often these geographic dimensions of policy concerns are critical to understanding the likely course of events or their implications for the US. Geographic analysts work as both specialists and generalists, applying their academic training in physical, human, and transportation geography to answering specific questions; exercising their integrative faculties in regional analysis, or calling on their abilities to identify and interpret broad patterns. More specifically, geographic intelligence officers

- describe and interpret emerging global patterns of population growth and refugee movements
- examine boundary disputes on land and in the oceans to determine the potential for conflict and the possibilities for resolution

- analyze transportation networks and development in international shipping
- assess terrain and environmental conditions as they bear on the outcome of insurgent and governmental activities in areas of conflict
- study water resources and rights issues, and anticipate possibilities for conflict over access to natural resources.

Qualifications for geographic analyst positions generally include advanced degree training in geography and a special interest in foreign area research. Foreign language and ADP skills are also highly desirable. Success on the job depends on ability to communicate conclusions and analysis through clear and concise written reports and briefings, and on demonstration of talent in integrating graphics, maps, and words into an effective consumer-oriented presentation. Ability to interact constructively with the widest range of professionals from other disciplines both within CIA and beyond is also part of the job.

Biographic Intelligence

Acting as a biographic area reference specialist, you will write reports on foreign leaders and provide answers to a wide variety of questions. You will obtain information through research in manual and computer-based files, by interviewing persons returning from overseas assignments, and through CIA's varied and sophisticated means of collecting needed data.

You will often work under pressure to produce reports urgently requested by other staff members and by government leaders.

The ability to analyze and to write clearly and concisely on short deadlines is essential. Interest in information storage and retrieval as well as the ability to read one or more foreign languages is desirable.

The positions require a master's degree with emphasis on area study, but a bachelor's degree with some area focus and relevant practical experience will be considered. Practical experience may take the form of overseas or military intelligence work.

Cartography

The Directorate of Intelligence has an organization staffed with professionals who are involved in the full range of cartographic activities and functions. To support the creation of a wide variety of maps, they have available the very latest in computer mapping technology. Such maps, and cartographic services, are used by DI analysts and other Agency employees to provide graphics that complement and support intelligence reports, briefings, and reference work.

Our capability is varied. We create maps of the world, continents, nations, and cities. We develop thematic maps that show political, economic, and agricultural subjects. We also create maps that explain political administration, transportation trends, population characteristics and movements, and the flow of commodities as well as other special concerns.

A noteworthy achievement is our digital data bank of the world, which dramatically facilitates and speeds the development of maps. As the data bank is updated and enlarged, it eventually will be possible to create entire maps electronically with no or, at most, limited hand work.

The DI offers excellent career opportunities to persons with master's degrees in cartography and geography. Individuals with a bachelor's degree in one of these disciplines, a strong academic record, and practical experi-

ence will also be considered. We provide advanced training in these disciplines, as well as flexible career paths. You need to supply the initiative and creativity. The DI is mapping intelligence issues throughout the world . . . want to help?

Graphic Design/Illustrating

As a graphic designer or illustrator assigned to the Office of Current Production and Analytic Support, you will have the responsibility for designing DI intelligence reports and producing specialized graphics, charts, and illustrations for CIA reports and briefings and for use by the White House.

As a vital part of an interdisciplinary team, you will associate with senior members in the design field . . . plus experts in such disciplines as Cartography, Economics, Political Science, Sociology, Geography, Science, and Engineering. In addition, you will participate in an ongoing training and professional development program with strong emphasis in publication design and computer graphics.

A bachelor's or advanced degree in design or illustration and a good portfolio are required for all such positions.



How to explore a career with the Directorate of Intelligence

Experienced professionals and college students who are interested in a career with the Central Intelligence Agency are invited to apply for employment.

Because of the nature of our responsibilities, we must conduct a security investigation of each applicant. For this reason, it is important that you contact us well ahead of the time you expect to start working. (As much as nine to 12 months leadtime is desirable.)

To apply, write to the Director of Personnel, Central Intelligence Agency, Washington, DC 20505. Enclose a resume of your education and work experience and request preliminary application forms.

If you are in the metropolitan Washington area, you may call the CIA Recruitment Office to inquire about employment or to arrange for an interview appointment. The number to be called during weekday business hours is (703) 351-2028.

Or, if you are in college, see your Placement Officer (preferably six to nine months before graduation) and request an interview with the CIA representative who visits your campus or whose regional office may be situated nearby.

CIA is an Equal Opportunity Employer.





The Directorate of Intelligence
... where your career is America's strength



What you do can make a difference!