

Community Open Source Strategic Plan



February 1995



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Community Open Source Strategic Plan



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Introduction and Mission

This Strategic Plan describes the goals and objectives of the Community Open Source Program for the next seven years. It builds on the half-century-plus heritage of Open Source Information providers and users in the Intelligence Community. The Plan projects the role of the Community Agencies in the new era of more voluminous, multiple-media, English and foreign language information relevant to a larger range of user and customer¹ needs. This information represents a heterogeneous mix of data formats and is relatively diffused and largely beyond the control of the Government. This information has also reached a limit where a user or customer has difficulty finding it, evaluating its validity, or readily integrating it into classified all-source products without automated systems support.

In the coming years, the Community Open Source Program will carry out activities and initiatives which will make it possible to integrate fully a wide assortment of timely, relevant open source information into the work areas of three different groups of people: the all source intelligence environment of Community users, the deliberative arena of policymakers, and the operational milieu of government action officers.

This Plan also introduces the role and the challenges confronting the Community Open Source Program Office (COSPO), which was created by the Director of Central Intelligence (DCI) in March 1994 to develop, coordinate, and oversee the implementation of a coherent Community Open Source Program. COSPO anticipates and evaluates the satisfaction of open source requirements and is creating an integrated architecture that will improve the dissemination and distribution of open source information to users and customers, as well as better manage the information flow. COSPO is also responsible for defining and defending the National Foreign Intelligence Program (NFIP) Open Source Program activities and funding in the planning cycle, and for providing guidance and oversight to the program in the execution cycle. COSPO plans to carry out program activities through lead agencies that will be responsible for actions as shown under this Strategic Plan. The goals and objectives statements of the Plan are candidate areas where lead agency actions might be appropriate.

¹ As used in this Strategic Plan, the term "user" means a person within the Intelligence Community (IC). A "customer" is a person in a US Government agency outside the IC.

Vision Statement

In the working environment envisioned for just past the turn of the century, open source users and customers will be able at their places of work to gain access to all of the available information relevant to their jobs, whether it is highly classified intelligence information or open source information. They will be able to communicate with their co-workers in their own organizations, within the Intelligence Community, and in the world at large. They will be able to gain access to experts and information available in commercial and academic organizations. They will have tools—some general purpose and some specific to functional areas—available to help assemble, assess, and exploit the information.

The Community Open Source Program will enable users and customers to have timely access to all open source information pertinent to their needs in their work environments. The Program will improve in a cost-effective manner, the use, usefulness, and usability of open source information. It will improve acquiring, accessing, processing, distributing, disseminating, and exploiting open sources and make it easier to use more focused open source information. The Community will thereby be able to make more effective and efficient use of its unique, classified assets in support of its customers by ensuring that we “do not send a spy where a schoolboy can go.”

Assumptions

- Open source information will continue to be one of the principal information sources upon which users and customers rely; none of these will be in and of itself sufficient to meet all information needs.
- The environment in which users and consumers will be working will be increasingly characterized by on-line systems using a generally compatible set of automated tools.
- The current information revolution has been precipitated and characterized by:
 - Greater need and demand for information and intelligence;
 - Tailored, user-specific intelligence products that meet a precise need;
 - Improved access to larger amounts of raw and value-added information in traditional and new media, although open source in hard copy remains an overwhelming percentage of available material; and
 - Technology that, if properly applied, can be a servant in enabling the Community to implement its open source mission.

Challenges for the Rest of the Decade

- Leverage the use of rapidly changing commercial technology to benefit open source activities through judicious application of resources to meet unique Community needs.
- Ensure that customers can make the best use of open source as basic information safety net coverage for indications and warning.
- Take advantage of the rapidly growing volume and availability of open source information worldwide in multiple, heterogeneous media.
- Improve the signal-to-noise ratio of open source data so that Community users can discover and take advantage of growing volumes of relevant information.
- Ensure availability of the best value-added materials in all languages through the most effective and efficient use of human and technical capabilities.
- Merge open source information into the mainstream all source work environment as the Intelligence Community moves toward effective multi-level secure systems.
- Establish effective information pathways that link the Community with other US Government agencies.
- Ensure adequate NFIP funding and management for critical Community open source and related activity.

Trends in Open Source

Open Source Trends

Increased Volume

Caused by advances in information technology, which has lowered the "entry cost" of publication; increased commerce in information; and the fact that much of what had been secret is no longer so.

"Narrowcasting"

Fragmentation of sources caused both by new technology and growing profusion of nation-states, ethnic regions, and languages/dialects.

Gray Literature

Increase in volume and value of publications targeted for select audiences, e.g., conference proceedings, annual reports, and tradeshow brochures.

Internet & Commercial On-Line Databases

New publishers and new publishing techniques, including move away from free text and toward "structured" products, "hyper-text," and multi-media.

Foreign Language Materials

Increasing availability of on-line digital materials in original languages.

Required Community Responses

- Increased communications, storage, and processing capacity; and development of unclassified computing and communications infrastructure.
- Improved "discovery" tools and better dissemination profiling algorithms.
- Acceleration and augmentation of "Hub and Spoke" collection facilities.
- Increased use of full-page facsimile (Scanfax) coupled with steadily improving Optical Character Recognition (OCR).
- Concerted effort to access publications at an earlier (digital) stage in their makeup/composition.
- Increased translation capacity; contract translators, here and abroad, and use of intelligence "reserve corps."
- Better "Operational Management" of gray literature collectors including Defense Attaches *et al.*
- Better distribution, including facsimile/OCR, and improved dissemination.
- Unclassified network for Internet access and sharing across Community (OSIS).
- Replication of open source information on INTELINK servers.
- Increased, Community-coordinated acquisition of commercial sources, databases, etc.
- Industrial-strength tools and multi-media manipulanda, involving more capable desktop hardware, higher bandwidth communication (LAN/WAN).
- Bring Russian and Japanese machine translation to full operational status.
- Invest in Chinese and Arabic machine translation.

Goals and Objectives

Goal 1 — Technology Policy and Practices

Apply proven commercial and government technology and best practices to all open source activities.

Goal 2 — Open Source Information System

Provide an architecture and infrastructure to facilitate communication and information distribution within the Intelligence Community and beyond, at the unclassified level, to support open source activities.

Goal 3 — Open Source Requirements

Determine and prioritize Community requirements that open source can meet to satisfy user and customer information needs.

Goal 4 — Information Collection and Acquisition

Provide for an infrastructure that takes advantage of the increasing availability of traditional and new forms of open source information and the means of accessing and acquiring them.

Goal 5 — Information Processing and Transformation

Provide for efficient value-added processing of Community open source data to ensure timely and easy use by the user and customer.

Goal 6 — Information Discovery, Retrieval, and Exploitation

Provide users with the capability to discover, retrieve, and exploit relevant information effectively in their work environment, with minimal specialized knowledge and training, from the vast quantities of openly available information.

Goal 7 — Security

Ensure a protected operating environment for Community users of open source information that provides for data integrity and continuity of operation while protecting intellectual property rights.

Goal 8 — Information Sharing Outside the Intelligence Community

Provide a capability for the Community to support other US Government efforts to share unclassified data holdings beyond the Community.

Goal 9 — Open Source Program Management

Provide clear, cohesive Community guidance for NFIP open source activities to achieve synergy among all those involved.

Goal 10 — Preservation and Expansion of the Resource Base

Preserve a sound, viable, high quality base of resources and capabilities within the NFIP open source program to sustain the necessary expansion of open source activities to meet the challenges of the future.

Goal 1

Technology Policy and Practices

Apply proven commercial and government technology and best practices to all open source activities.

Objectives

- Monitor technology developments in the rest of the government and commercial world in order to use commercial off-the-shelf (COTS) and government off-the-shelf (GOTS) solutions, especially in the near term.
- Invest open source funds in the integration of proven new enabling technologies critical to improving appropriate open source activities, rather than in R&D for the technologies.
- Encourage appropriate NFIP R&D investment through judicious application of Community resources in areas where the current pace or scope of development is not in line with Community open source needs.
- Retain agility in adhering to commercial practices and adopting government standards for Community open source activity.

Goal 2

Open Source Information System

Provide an architecture and infrastructure to facilitate communication and information distribution within the Intelligence Community and beyond, at the unclassified level, to support open source activities.

Objectives

- Establish and expand the Open Source Information System (OSIS) as the backbone architecture for accessing, acquiring, processing, distributing, and manipulating open source information.
- Establish, operate, and enhance system capabilities on nodes at Community OSIS sites.
- Coordinate the development of OSIS and INTELINK as compatible capabilities.

Goal 3

Open Source Requirements

Determine and prioritize Community requirements that open source can meet to satisfy user and customer information needs.

Objectives

- Identify national policymaker, warfighter, and Community user information needs that can be met by open source.
- Maintain, aggregate, and update existing open source requirements in Community components.
- Create an agile, interactive process for users and customers to specify information needs and requirements.
- Develop an evaluation and appraisal system to determine how well open source information has satisfied needs.

Goal 4

Information Collection and Acquisition

Provide for an infrastructure that takes advantage of the increasing availability of traditional and new forms of open source information and the means of accessing and acquiring them.

Objectives

- Maintain a robust worldwide collection capability.
- Expand access to and acquisition of hard and soft copy media, including gray information, in response to user needs; emphasize soft copy.
- Encourage innovative techniques to access and acquire information.
- Leverage existing global communications to enhance access to and coverage of open source information.
- Replace and upgrade outmoded access and collection equipment and procedures.
- Access and acquire open source information in ways that optimize the value of expenditure of Community resources, broaden its availability throughout the Community, and ensure full compliance with copyright and other constraints.
- Expand use of non-Community agents for accessing and collecting information to supplement or substitute for traditional Community efforts.

Goal 5

Information Processing and Transformation

Provide for efficient value-added processing of Community open source data to ensure timely and easy use by the user and customer.

Objectives

- Integrate proven technology in Community open source data transformation activities (conversion, translation, and formatting) in processing text, graphics, images, sound, and motion video in response to user requirements.
- Encourage development of processing operations that work on foreign language as well as English-language materials.
- Increase investment in both machine and human translation capabilities.

Goal 6

Information Discovery, Retrieval, and Exploitation

Provide users with the capability to discover, retrieve, and exploit relevant information effectively in their work environment, with minimal specialized knowledge and training, from the vast quantities of openly available information.

Objectives

- Provide capabilities which enable users to access, scan, browse, search, and retrieve from the expanding volume of open source information in multiple media and languages.
- Develop means for users to control the flow of open source information to them.
- Enable users to recall open source information from their own and remote archives.
- Emphasize capabilities and techniques which increase precision and accuracy in retrieving open source information.
- Insert enabling technologies for near-term improvements of exploitation at the workstation level.
- Give users better knowledge of and the capability to apply exploitation tools developed outside their immediate environments.

Goal 7

Security

Ensure a protected operating environment for Community users of open source information that provides for data integrity and continuity of operation while protecting intellectual property rights.

Objectives

- Support Community information architecture features that allow users from their work environment, whatever their respective security configurations are, to use open source information distributed throughout the Community and elsewhere.
- Protect Community-held, networked, unclassified data holdings from inadvertent manipulation, deliberate intrusion from outside elements, or unauthorized use of intellectual property.
- Adopt procedures to safeguard against the flow of classified information into the unclassified environment.

Goal 8

Information Sharing Outside the Intelligence Community

Provide a capability for the Community to support other US Government efforts to share unclassified data holdings beyond the Community.

Objectives

- Support US Government efforts to determine how to share data holdings while protecting intellectual property rights.
- Rely on non-Community government intermediaries to make non-Official Use Only, copyrighted information available to the private sector.

Goal 9

Open Source Program Management

Provide clear, cohesive Community guidance for NFIP open source activities to achieve synergy among all those involved.

Objectives

- Identify all open source activities in Community agencies and delineate the interactive roles of Community open source components.
- Invest in tools, technology, data, and people to achieve the optimum satisfaction of user needs.
- Strive for better resource distribution across the activities of accessing, acquiring, processing, distributing, and exploiting information to best meet user needs.
- Provide guidance for, review, and evaluate individual NFIP programmatic activities that affect the Community's open source efforts.
- Use cost-benefit analyses of open source activities to maximize resource investment.
- Identify departmental lead agents to carry out Community open source goals and objectives and hold them accountable to Community oversight.
- Staff the Community Open Source Program Office with department representatives who are dedicated to implementing Community approved goals and objectives.

Goal 10

Preservation and Expansion of the Resource Base

Preserve a sound, viable, high quality base of resources and capabilities within the NFIP open source program to sustain the necessary expansion of open source activities to meet the challenges of the future.

Objectives

- Maintain a solid programmatic infrastructure and resource base of personnel, structures, organizations, relationships, and human and technological capital investment within the NFIP open source program.
- Within the NFIP open source program build strategic innovative solutions to achieve program growth on the basis of the resources required to meet the explicit needs of the Community.
- Champion the funding of Community infrastructure efforts upon which Community open source activities depend.
- Advocate the Community Open Source Program before Community managers, the Executive Branch, and Congress on all program and budget/DCI Directive issues related to or affecting open source activity.

Director of Central Intelligence Directive 2/12

COMMUNITY OPEN SOURCE PROGRAM

(Effective 1 March 1994)

Pursuant to the National Security Act of 1947, as amended, and Executive Order 12333, policies and procedures are hereby established for the management of the Intelligence Community Open Source Program.²

1. Purpose

The Intelligence Community recognizes that more effective use of open sources in a variety of intelligence applications will lead to improved products and services for Intelligence Community consumers. To manage the use of open source information by the Intelligence Community, this directive establishes the Community Open Source Program and a Community Open Source Program Office (COSPO) within the Central Intelligence Agency to develop, coordinate, and oversee implementation of the Community Open Source Program. The Director of COSPO will be appointed by the Director of Central Intelligence, will be his Principal for all open source matters, and will serve as the Open Source Program Manager. This directive also establishes a Community Open Source Steering Committee comprised of senior managers appointed by the Director of Central Intelligence.

2. Definition

Open source information for purposes of this directive is publicly available information (i.e., any member of the public could lawfully obtain the information by request or observation), as well as other unclassified information that has limited public distribution or access. Open source information also includes any information that may be used in an unclassified context without compromising national security or intelligence sources and methods. If the information is not publicly available, certain legal requirements relating to collection, retention, and dissemination may apply.

3. Objectives

The COSPO is responsible for the definition and defense of the Open Source Program in the planning cycle, and for providing guidance and oversight to the program in the execution cycle. The Office, with Community departmental open source program managers, develops an optimum allocation of resources across the Community in the execution year, subject to ratification by the Open Source Steering Committee. Changes in the scope and resources of the Open Source Program must be agreed to by the Steering Committee. Through this collaborative process, the objectives of the COSPO are to:

- a. Oversee a process for coordinating responsive actions to satisfy user needs.
- b. Provide advocacy and defense of departmental development and operational efforts.
- c. Ensure funds for critical open source activities.
- d. Oversee a process for identifying and prioritizing open source substantive requirements.

4. Open Source Management

The Open Source Steering Committee provides top-level program and policy guidance to the Open Source Program. The Steering Committee is chaired by the Executive Director for Intelligence Community Affairs and includes the Executive Director of the Central Intelligence Agency and the Directors of the Defense Intelligence Agency and the National Security Agency, as well as the Deputy Director for Science and Technology of the Central Intelligence Agency, the Deputy Director for Support Services of the National Security Agency, and the Deputy Director for Production of the Defense Intelligence Agency. The Director of COSPO serves as Executive Secretary to the Steering Committee.

² This directive supersedes DCID 2/12, effective 1 June 1992.

The Departmental Program Council, comprised of customer and provider representatives from all interested Intelligence Community organizations, will be chaired by the Director of COSPO and will provide advice and counsel to the Community Open Source Program Office. It will serve the Director of COSPO as a vehicle for discussing proposed Community program initiatives, communicating customer and provider feedback, and ensuring implementation of the Open Source Program.

The COSPO will establish other standing or ad hoc advisory and coordinating boards, panels, and committees as necessary to carry out its program management responsibilities.

5. COSPO Functions

Functions of the COSPO shall include:

- a. Strategic Planning — The COSPO will oversee implementation of the *Community Open Source Strategic Plan*. As necessary, the COSPO will review and update the plan.
- b. Program Formulation and Representation — The COSPO will issue planning guidance and will coordinate preparation and execution of the Open Source Program. With departmental open source managers, the COSPO will review execution-year programs prior to the execution year in order to optimize the flexibility and responsiveness of the Open Source Program. The COSPO also will conduct *ad hoc* program analysis and evaluations as necessary.
- c. Initiative and Innovation Sponsorship — Using funds appropriated for the purpose, the COSPO will begin Community initiatives and innovations, which subsequently will be funded in departmental programs.
- d. Operational Services of Common Concern — The COSPO will ensure Community coordination of the collection and acquisition of open source information and will represent open source capabilities and interests in national processes designed to manage user information needs.
- e. Systems Architecture — The COSPO will coordinate the design and implementation of the Community open source architecture and associated standards. The COSPO will independently assess currently employed technologies and procedures and evaluate promising alternatives.
- f. Development of Services of Common Concern — The COSPO will coordinate the development of new processing and exploitation tools and promote the integration of automated data processing tools developed elsewhere.
- g. Open Source Advocacy and Representation — The COSPO will defend Open Source Program submissions before Community executive review bodies, the Office of Management and Budget, and the Congress, and will represent the Open Source Program in appropriate Government and public forums.

6. Structure and Administration

As an Intelligence Community entity, the COSPO, located in the Central Intelligence Agency and reporting to the Deputy Director for Science and Technology, is jointly staffed in roughly equal proportion by the Central Intelligence Agency and other Intelligence Community officers who are detailed to the COSPO. The Director of COSPO will normally, but not necessarily, be an officer of the Central Intelligence Agency. The serving Director and Principal Deputy will not be from the same department or agency. Managers of the General Defense Intelligence Program, the Consolidated Cryptologic Program, the Central Intelligence Agency Program, and other intelligence programs will provide appropriate personnel to staff the COSPO with required skills; officers normally will serve rotational assignments of at least two years' duration.

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