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[Redacted]

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Working Paper

Approved For Release 2004/06/15 : CIA-RDP86M00612R000200020016-4

31 May 1972

MEMORANDUM FOR: Admiral Showers

SUBJECT : Concept Papers on Aspects of Management Information Mechanisms

1. Attached are four papers prepared by [Redacted] as think pieces to help us develop perspectives and a frame of reference for the various kinds of information that might be desirable to include in a DCI/IC data reservoir. The papers are intended as straw men, and may help to focus discussion on various aspects of our total DCI/IC data needs. As presently written, the papers do not represent proposals for action.

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2. Some aspects of these papers reflect discussions with [Redacted] and others. Those talks were stimulated by General Taylor's request that the Data Support Group develop a plan to take over the operation of the CCPC Facilities Inventory and [Redacted] request for our suggestions on a cross-reference mechanism.

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3. The paper, dated 12 May 72 and entitled "Management Information Mechanisms", refers in passing to "effectiveness measures." Our purpose in briefly mentioning this subject is merely to acknowledge that it is important in an overall, total concept, but not to suggest specific actions on this problem at this time. I would defer to [Redacted] for any further discussion of this aspect.

25X1

4. You have requested multiple copies of these papers for distribution to your committee considering DCI/IC data needs and the future configuration of a CIRIS-like mechanism or some alternative thereto. The following documents are attached; I suggest they be read in the order listed below:

- a. "DCI/IC Information Needs Synthesized ..." (undated)
- b. "Management Information Mechanisms," dtd 12 May 72
- c. "Intelligence Organizational 'Inventory,'" dtd 10 May 72
- d. "Cross-Reference System," dtd 10 May 72. (TS/COMINT)

e. Memo dtd 31 May 72 entitled "Fixes to Papers on Information Systems". This merely acknowledges a number of comments from [Redacted] that are not reflected in the preceding papers.

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[Redacted Signature]

Chief, IC/DSG

Enclosures (5)

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MEMORANDUM FOR: 

SUBJECT: Fixes To Papers on Information Systems

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 suggested the following fixes to my three papers on information systems (Cross-Reference System, Intelligence Organizational Inventory, Management Information Mechanisms). I agree with him, and will include them in the next iteration.

- a. Codewords and nicknames should be reflected in the system for five years after their cancellation to facilitate retrieval from older documents.
- b. Location should include coordinates (geographic or UIM?).
- c. Capital investment should include the value of removable assets.

He also suggested some non-substantive semantical changes that will improve the papers.

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DCI/IC INFORMATION NEEDS SYNTHESIZED FROM RECENT PAPERS, AND QUESTIONS
CONCERNING THEM

RESOURCE INFORMATION NEEDS:

1. Resource data on a functional, geographic and subject target basis,
relatable to organizational entities.

What level of aggregation does PRG desire?

What level organization?

What relationships are of interest?

2. FYDP data displayed by sensor and platform.

What level of aggregation does PEG desire?

Does this differ in some way from present CIRIS capability?

3. Collection and processing costs by sensor and platform.

Is this an essential necessary to derive 2, above?

What level of aggregation does PEG desire?

4. Full allocation of support costs.

What does PEG mean by "full allocation"?

How should support costs be allocated?

5. Production costs.

What are the categories into which production is to be divided?

How does PEG want production costs displayed?

6. Changes in budget and programming trends.

To what do PEG and PRG want changes to relate?

What is the validity of programming changes past Program Year 1?

7. "Official" resource data by organization, reporting entity (CIRIS),

program element, mission, function, sensor, activity and appropriation
category.

What organizational level does CCG want?

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How does CCG use the term "program"?



8. Out-of-cycle resource update based on significant decrements.

What is a significant decrement?

How are decreases to be displayed?

How are out-of-cycle data calls to be handled?

Study GP

ORGANIZATIONAL INFORMATION NEEDS:

9. Identification of all units engaged in intelligence work in terms
relatable to dollars and manpower.

✓ What is a unit?

✓ Which data elements are to be relatable to resources?

10. Relationship of intelligence work activities to organizational entities.

✓ How is "activity" defined?

✓ What is an organizational entity?

✓ How should the relationships be expressed? *① function ② target
③ sensor ④ location*

11. Identify the universe of intelligence assets.

✓ What are intelligence assets?

✓ Is the universe complete without tactical intelligence assets? *no.*

✓ What comprises "identification"?

12. Describe intelligence assets in terms of:

a. Basic (unchanging) data: name, location, command relationships,
authority creating, mission, support received and provided.

b. Subject to change: targets, capabilities, major equipment,
TOA, authorized strength.

*operational
characteristics*

Have these data elements been tested?

Are these data elements all that are needed?

How does PEG define capabilities; should they be in a different system?

What specific kinds of data are needed to satisfy each of the data elements?

13. Sensor and platform types, their cost, their manpower, and their

conspicuousness
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What are costs? *Capital investment*

Should these be elements of a capabilities system?

How are sensors and platforms to be described?

What does PEG mean by conspicuous?

14. Conspicuous facilities.

What are facilities?

What is meant by "conspicuous"?

15. Codewords, nicknames, and their definitions.

Is there a need to include acronyms?

What are the security implications of including the definitions of codewords?

Is there an existing, central listing of codewords and nicknames for the intelligence community?

Side issue

CAPABILITIES INFORMATION NEEDS:

16. A capabilities inventory.

Capabilities of what?

Does PEG also want limitation, and, if so, what kinds?

How are capabilities to be described--designed, actual, potential; in general or against specific targets and geography?

What is to be the source of capabilities data?

important points

OBJECTIVES AND REQUIREMENTS INFORMATION NEEDS:

17. Linkages among geographic and subject target priorities.

What does PRG mean by "linkages"?

Can priorities be separated from both geographic and subject targets?

How can priorities usefully be displayed?

18. Subject target and geographic area breakouts compatible with

DCID 1/2 Supplement objectives.

What kind of breakouts does PRG have in mind?

Can this be achieved with existing overlaps among objectives?

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Is a stable target universe prerequisite to satisfying this need?

19. The DCID 1/2 Supplement.

Does PEG want only the document, or automation of its matrices?

What kinds of output would be desired from automation of the matrices?

20. Anticipated requirements for Program Years 1 and 2.

In what manner are requirements to be expressed?

With what validity can requirements be projected 2 to 3 years hence?

Should requirements for current and budget years be included?

Would it be better to divide requirements into "current", "near-term",
and "mid-term" categories?

Should requirements be related to objectives and priorities, and if
so, how?

21. Relationships between requirements and resources.

What kind of relationships are envisioned?

To what level of detail are requirements to be stated?

Is that level of detail compatible with the level to which resource
data is now displayed, and if not, what adjustments to CIRIS
are needed?

22. Relationships between assets and requirements.

How does PEG define assets?

What relationships are of interest?

To what level of detail are requirements to be stated, and is the
definition of assets compatible with that level?

23. DCI's goals for the Intelligence Community.

In what forms are these goals stated?

To what extent can conceptual goals be included?

Is this need met by DCID 1/2 Supplement?

24. DCID 1/2 Supplement priorities.

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Can intelligence priorities be meaningfully stated separate from

either objectives or geographic areas?

To what ought priorities be related?

EFFECTIVENESS INFORMATION NEEDS:

25. Year-to-year trends in production activity.

How does PRG define "production activity"?

Is the level of activity to be measured, or is effectiveness to be evaluated?

Which trends are to be followed?

What are the standards against which production activity is to be evaluated, or the criteria against which it is to be measured?

26. The relative value of facilities and their inherent capabilities.

How does PEG define facilities?

If PEG desires relative value, what are the criteria for worth?

If relative effectiveness is desired, what are the norms and standards against which "facilities" are to be evaluated?

To what extent is value based on effectiveness?

Can the effectiveness of "facilities" of different disciplines be compared, as HUMINT with COMINT with IMAGERY?

Can relative effectiveness indices be developed for systems application?

Is effectiveness a matter for continuing judgmental decision and, hence, not capable of being systematized?

27. Judgments on how well assets satisfy requirements.

How does PEG define assets and requirements?

What are the criteria for satisfaction of requirements?

Can judgments be systematized?

↑
outside
MIS.

yes

no

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MEMORANDUM FOR:

SUBJECT : Management Information Mechanisms.

1. Papers prepared by DCI/IC components indicate a need for detailed data descriptive of the intelligence community, its participants, and its work. This memorandum presents a concept for an information network covering five distinct but related aspects of the intelligence world. A conceptual exploration of the treatment of descriptive information appears useful now, whether or not the implementation of specific systems is feasible at this time. There is a need to establish outer boundaries, to indicate possibilities that should be made specific, and to consider relationships that might otherwise be overlooked. This conceptual framework should help us develop parameters for what we can and should do now, and what we consciously forego for the present.

2. The concept herein for an information network encompasses (a) an intelligence organizational inventory, (b) an objectives and requirements inventory, (c) a catalogue of intelligence capabilities, (d) a resources data base, (e) effectiveness measures, and, (f) a cross-reference system.
CCPC
JSOP + their priorities
not to lead
best

Some pertinent assumptions to be tested are at enclosure 1.

a. The intelligence organizational inventory would identify the various organizational entities which comprise the national intelligence community, their relationships to each other, and the intelligence work which they undertake. It would replace both the CCPC Overseas Facilities Inventory and the CIRIS Reporting Entity Identification data. DSG has prepared a separate paper outlining data element assumptions for such an inventory.

SECRET-WORKING PAPER

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b. An objectives and requirements inventory would relate DCID 1/2 and JCS intelligence objectives and the intelligence collection and production requirements derived from them to the operations, programs, projects and activities of intelligence organizations working toward their satisfaction. It would identify quantitatively the effort expended (not the qualitative results achieved) against those requirements by priority, facilitating resource decisions based on the contribution of specific intelligence assets toward goal achievement.

c. A catalogue of intelligence capabilities would provide data on the designed, actual and potential performance capabilities of intelligence units and systems by geographic area and against specific targets. It would describe the variables that limit system capabilities and degrade unit performance. It would facilitate cross-program collection planning.

d. The resources data base would be based on CIRIS, which displays dollar and manpower resources in relation to intelligence entities, system types, functions and the targeting of objectives. It would expand CIRIS to include the accounting data that is needed to close the feedback loop; to make visible the actual application of resources so that the cost of the various intelligence operations, programs, projects and activities could be related to their yield.

e. Effectiveness measures would provide information on the actual performance of intelligence organizations and systems. This would identify the sensor-platform mixes that were empirically determined to be most effective against specific geographic areas and targets within these areas. (The lack of definitive norms and standards against which

intelligence assets can be measured is a serious limitation for any evaluation measurement effort. The development of such norms and standards should be a high-priority DCI/IC task.)

f. The cross-reference system is the subject of a separate memorandum to Mr. Hitchcock, Chief IC/PEG.

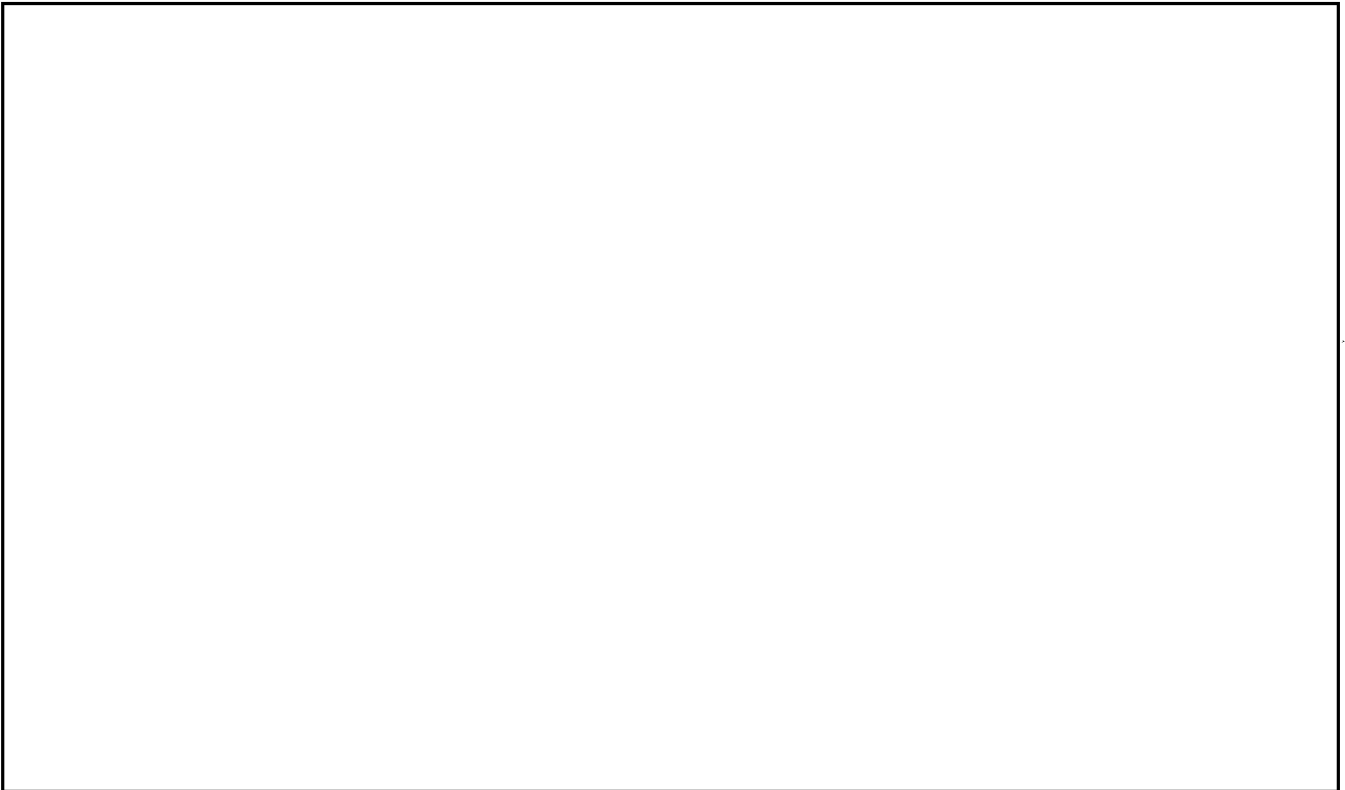
3. Conceptually, it must be recognized that there are phenomena which tend to defeat the development of an ideal network of systems. It may not be possible to distribute resources with precision among collectors with multi-target/multi-area capabilities, or against serendipitous collection "take".

It may not be possible to place relative values on both the potential and actual capabilities of some collection systems, or to determine probability indices for collection success against some target categories. It may be infeasible to assign value to redundant confirmation, to differentiate precisely between substance and trivia, to quantify values for timeliness, or to provide relative values for precise and gross data. Some intelligence operations and activities may be too sensitive to permit their description in a computerized information system. It should, however, be possible to develop, within the limitations of what is reasonably attainable, a data base capable of rapidly providing the essential information that is needed to meet DCI/IC day-to-day requirements.

4. Although the DCI/IC is not expected to be involved in resource issues concerning the so-called tactical intelligence units and activities, they should be considered in any concept for a national intelligence information network. (As used in this paper, tactical intelligence assets exclude combat units, such as an armored cavalry troop, and intelligence staff components of

headquarters below the numbered army, fleet or air force.) We are aware of JCS and Service reluctance to expose tactical assets to scrutiny, even within the Department of Defense. We believe, however, that visibility of the relationships between "tactical" and national assets is necessary for the IC Staff to carry out its responsibility for sound recommendations for the allocation of resources to national programs. The following examples, from opposite ends of the tactical intelligence continuum, are illustrative:

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5. In our view, DCI/IC follow-on work on mechanisms for management information, development, in order of priority, should be: an intelligence organizational inventory, a cross-reference system, and an objectives and requirements inventory. These three, along with a continuation of a CIRIS-like resources targeting system, are largely factual. They can and should go ahead together as they are interrelated.

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6. Norms and standards against which to evaluate intelligence units and systems and effectiveness measures are interrelated. Both require a large amount of exploratory work, analysis and testing. This is a task where all DCI/IC components may have inputs and where the IC Systems Analysis people have a major role. It will require several years of continuous effort.

7. Accounting data for PPB feedback necessarily involves prior fiscal years. The DoD information is available at the FYDP level of operation (i.e., Program Elements but not individual units and components) from ASD(C). To identify unit and component resources, it would be necessary to tap Service and agency comptrollers. Relating this information to the substantive yield, gain or value of intelligence can provide historical insights and trends and may be helpful as one reference for current planning. However, this type of use assumes existence of standards and value measurement criteria. Until the work on those matters has progressed considerably, this accounting data has a low priority.

8. The availability of data to feed the information network is a policy matter requiring agreement among DCI/IC, INR, ASD(I), and the CDIP program managers. This paper represents an initial effort to set the stage for agreement among the DCI/IC components as to IC Staff information needs. After we have reached agreement, it will be necessary for D/DCI/IC to negotiate for the inputs.

9. We would appreciate your comments.



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: ASSUMPTIONS CONCERNING DCI/IC INFORMATION NEEDS

1. The development and implementation of the information network described herein will eventually be supported by the intelligence community.
2. Support for this network notwithstanding, individual program managers will continue to jealously guard their perceived prerogatives and seek to reduce the exposure of their programs to scrutiny that could result in program cuts. *"Management Decisions"*
3. Data on intelligence entities, plans, operations, programs, projects and activities will be required in sufficient detail to:
 - a. Establish relationships among intelligence organizations; collection, processing, production and support functions; command and tasking channels; and customers serviced. ✓
 - b. Provide background for program reviews. ✓
 - c. Provide for the production of a quick-reference "fact book" containing basic data on entities of IC Staff interest. ✓
4. The DCI/IC will require data concerning tactical intelligence units and activities, at least to the extent that the DCI can:
 - a. Meet Congressional expectations that the DCI be aware of the totality of US intelligence;
 - b. Make judgments concerning the allocation of resources to those national intelligence entities on which the tactical intelligence effort impacts.
 - c. Conduct national intelligence operational planning, which requires an awareness of the tactical intelligence effort in relation to national intelligence targets.

*Submitted
DCI Staff*

5. For the foreseeable future, the JCS and the Services will resist inclusion of resource data on tactical intelligence units in a community data base because of concern:

a. That tactical unit resources could be diverted from support of the operating forces;

b. That intelligence funding could be centralized at a level that diminishes U&S command operating control over the resources for their integral tactical intelligence capabilities;

c. That if made visible, tactical intelligence resources could be subject to national intelligence tradeoff decisions.

6. Because tactical intelligence units and activities are external to the CDIP and are reviewed as integral elements of the Defense programs under which they are funded, and because decisions concerning them cannot properly be separated from decisions concerning the capabilities of the combatant forces which they support, the IC Staff will not be required to make recommendations concerning the resources to be allocated to them.

7. Although the IC Staff will not need program/budget resource data for tactical intelligence units and activities, it will have a continuing need to be aware of the manner in which their work impacts on the resource requirements of national entities.

8. Codeword and nickname meanings and their relationships to intelligence entities and programs will be made available, and IC personnel will be cleared for access to them.

9. Authority will be granted to maintain codewords and their definitions in a secure, computerized data base.

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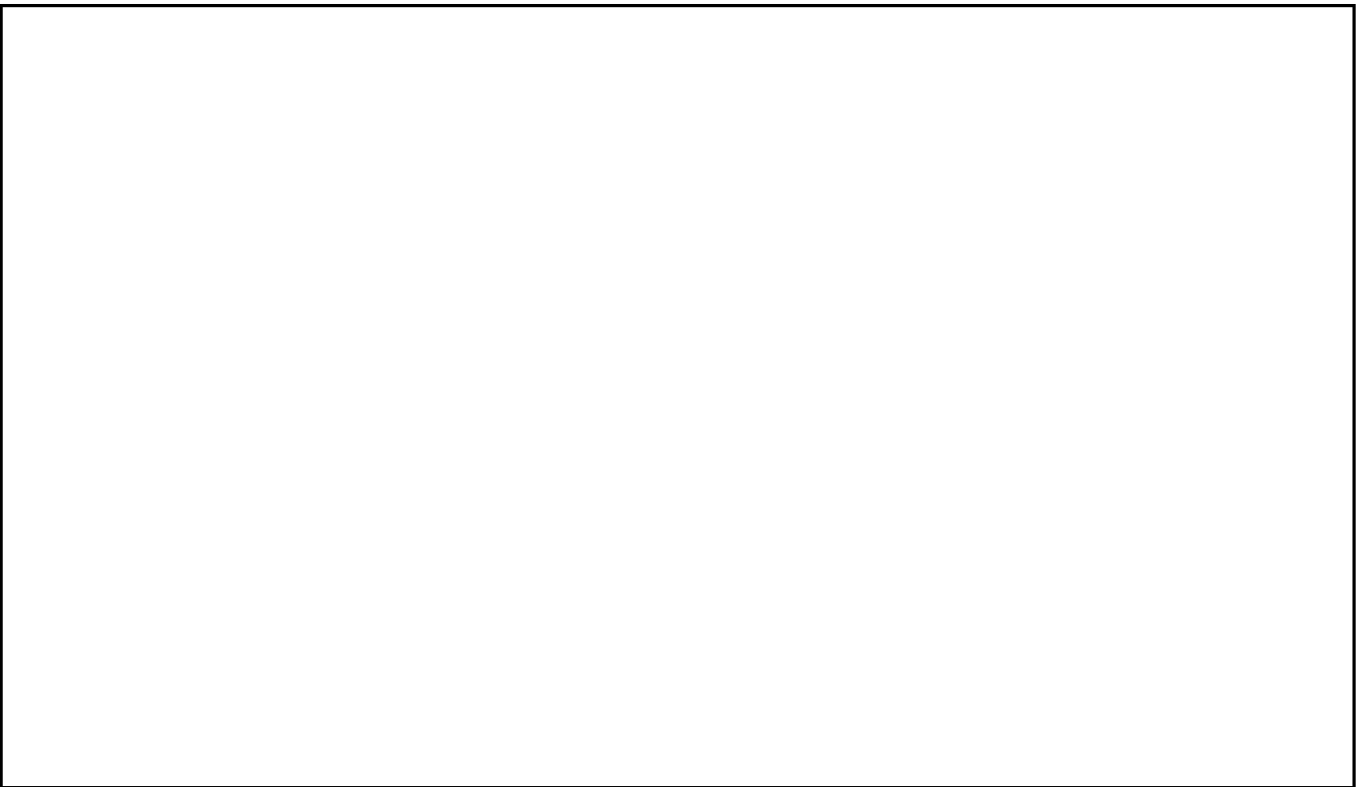
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SECRET-WORKING PAPER

-3-

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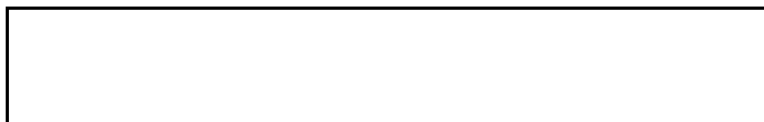
5. In our view, DCI/IC follow-on work on mechanisms for management information, development, in order of priority, should be: an intelligence organizational inventory, a cross-reference system, and an objectives and requirements inventory. These three, along with a continuation of a CIRIS-like resources targeting system, are largely factual. They can and should go ahead together as they are interrelated.

6. Norms and standards against which to evaluate intelligence units and systems and effectiveness measures are interrelated. Both require a large amount of exploratory work, analysis and testing. This is a task where all DCI/IC components may have inputs and where the IC Systems Analysis people have a major role. It will require several years of continuous effort.

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9. We would appreciate your comments.



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ASSUMPTIONS CONCERNING DCI/IC INFORMATION NEEDS

1. The development and implementation of the information network described herein will ~~eventually~~ ^{per Mac 4.} be supported by the intelligence community.

2. Support for this network notwithstanding, individual program managers will continue to jealously guard their perceived prerogatives and seek to reduce the exposure of their programs to scrutiny that could result in program cuts.

3. Data on intelligence entities, plans, operations, programs, projects and activities will be required in sufficient detail to:

- a. Establish relationships among intelligence organizations; collection, processing, production and support functions; command and tasking channels; and customers serviced.
- b. Provide background for program reviews.
- c. Provide for the production of a quick-reference "fact book" containing basic data on entities of IC Staff interest.

4. The DCI/IC will require data concerning tactical intelligence units and activities, at least to the extent that the DCI can:

- a. Meet Congressional expectations that the DCI be aware of the totality of US intelligence;
- b. Make judgments concerning the allocation of resources to those national intelligence entities on which the tactical intelligence effort impacts.
- c. Conduct national intelligence operational planning, which requires an awareness of the tactical intelligence effort in relation to national intelligence targets.

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5. For the foreseeable future, the JCS and the Services will resist inclusion of resource data on tactical intelligence units in a community data base because of concern:

a. That tactical unit resources could be diverted from support of the operating forces;

b. That intelligence funding could be centralized at a level that diminishes U&S command operating control over the resources for their integral tactical intelligence capabilities;

c. That if made visible, tactical intelligence resources could be subject to national intelligence tradeoff decisions.

6. Because tactical intelligence units and activities are external to the CDIP and are reviewed as integral elements of the Defense programs under which they are funded, and because decisions concerning them cannot properly be separated from decisions concerning the capabilities of the combatant forces which they support, the IC Staff will not be required to make recommendations concerning the resources to be allocated to them.

7. Although the IC Staff will not need program/budget resource data for tactical intelligence units and activities, it will have a continuing need to be aware of the manner in which their work impacts on the resource requirements of national entities.

8. Codeword and nickname meanings and their relationships to intelligence entities and programs will be made available, and IC personnel will be cleared for access to them.

9. Authority will be granted to maintain codewords and their definitions in a secure, computerized data base.