# TOP SECRET

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14 November 1979

MEMORANDUM FOR THE RECORD

SUBJECT:   SAC Briefing and Visit

1.   General

On Wednesday and Thursday November 7-8 1979 the Strategic Air Command, 544 ARTW, provided a briefing to DASITT, in Omaha, of the major ADP-T system support to imagery processing as well as all-source intelligence production responsibility of the wing.   Numerous SAC officers and enlisted personnel participated in these briefings.   See the attached agenda for indication of the major players and comprehensive nature of this visit.   DASITT attendees were:

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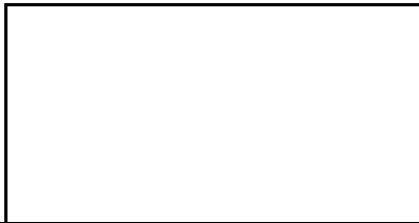
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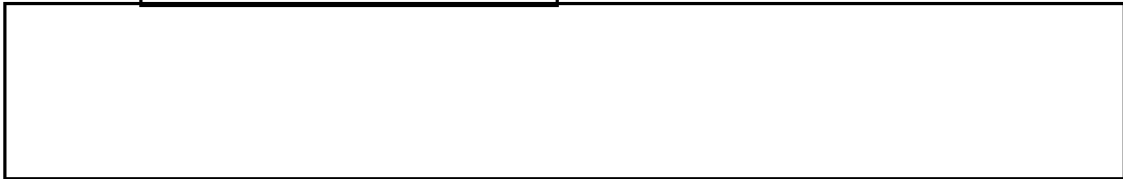
2.   Data Flow and ADP-T Systems

The attachments to this memorandum include the SAC response to the preliminary data call and supporting information concerning three operational computer systems and one telecommunication system of moderate to large scale, the Operational Intelligence Support System (OISS), composed of five AN/GYQ-21V's intended to evolve into a two way internal/communications and routing capability at SAC and with external organizations via AUTODIN, IDHS-11, SOCOM and DDS.  Additionally, more
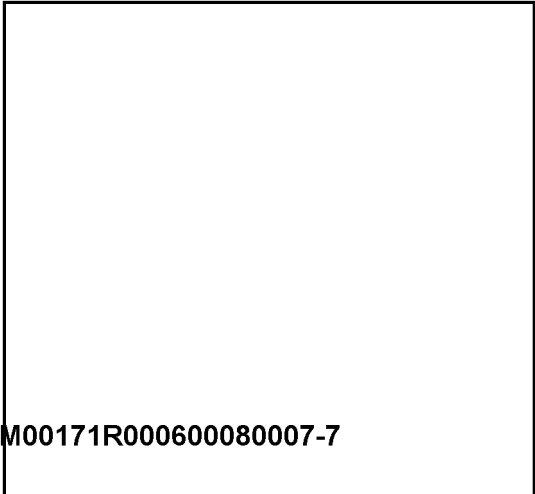
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USAF  review(s) completed.

SUBJECT: SAC Briefing and Visit

detailed ADP descriptive has been placed in the SAC/PACER file, but is not distributed with this memo. The three major ADP systems operational at SAC are PACER, System 70 and TRICONS. The system of major interest to the DASITT is PACER. System 70 and TRICONS, though both make extensive use of the output of PACER, serve functions which only minimally (less than 5%) are associated with imagery ADP-T. This report shall thus concentrate primarily on PACER. Included also in the attachments is an out-of-date, yet still accurate depiction, of the Integrated Data Base environment which is the "heart" of PACER. The PACER Data Base is a collection of interconnected files and records (network structure) of approximately 500 million characters associated with 90 thousand installations (targets). Half of these characters serve link and control functions. These installations include almost all of those designated as COMIREX targets active for collection and/or exploitation. The "file" also includes a substantial number of installations of interest to SAC to support its SIOP responsibility and DOD delegated production effort for EOB Volume I, most AOB and offensive/defensive missile order-of-battle.

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3. ADP Operational Concept

It is difficult to quantify the magnitude of ADP-T in SAC associated with imagery processing. In many ways SAC has designed and operates its computer environment as an all-source intelligence system compatible with the information requirements and needs of its all-source analysts. Never-the-less, it is not arguable that the magnitude of information held within the PACER Data Base has been derived from imagery and that the capacity requirements of PACER seem directly proportional to the volume and timeliness of imagery which results from imagery satellite collection systems. PACER processing load is at least 75% related to two major PACER subsystems: PI support and Collection Management. While ELINT processing is a major activity at SAC, in PACER at least it serves primarily as an important collateral source for imagery exploitation functions and verification/validation data for all-source analysts relative SIOP and EOB delegated production. Conversely, System 70 is greater than 80% utilized for ELINT processing functions, using PHOTINT (output from PACER) as its primary collateral source. Plans are currently underway to replace and integrate both PACER and System 70 function with new computer hardware and software. Competitive solicitation and procurement is expected to be well underway in FY-80.

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4.  Integrated, All-Source Imagery Exploitation

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5.  Deficiencies, Problems and Issues

The major complaints heard at SAC were:

*   poor user response time of PACER
*   difficult to find out (from AIRES) the timely status of SAC
    collection requirements [                    ]                    25X1
*   outmoded and difficult to maintain HW/SW associated with
    both PACER and System 70
*   concern with [                    ]                               25X1
*   some concern with an increasing "national exploitation
    responsibility" without concurrent increases in IA resources
    and improved IA expertise.

Excepting for the last point above, SAC believes that its planned
IDHS-80 upgrade will solve its ADP-T deficiencies and provide access to
supporting organization information in a more timely and suitable
manner.  These plans include wide spread access to AIRES and (via COINS)
other data bases of interest; doubling of the number of remote inter-
active stations (CRT) for their internal user to access, maintain, and
monitor information in the PACER data base; and electrical transmission
of appropriate information within and external to SAC to drastically

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minimize magnetic-tape interchange, double entry for requirements
processing and timely receipt of ephemeral data and National
Collection/Exploitation Requirements and Results.  They would very much
like to have a CAMS terminal, if only in read/query mode.  And with the
current AIRES capability, their request seems reasonable.

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6.  Future

We discussed soft-copy exploitation and DDS in some detail.
While some present equipment (hardware) and SAC internal imagery
distribution delays were evident at this time, none of which seem
mission limiting or without remedy, there seemed to be consensus that
the quality of the imagery from the DDS was acceptable to SAC IA
requirements.  Most photo-interpreters indicated a non quantifiable
reduction in NIIRS, though a few believed that the reduction in quality
was nearly one (1), particularly with lower quality imagery of greater
obliquity.  Soft-Copy is not yet an issue. We were informed that SAC
had opted to go with the IDEX system and watch progression in this area.
Compass Preview will continue as a low-level R&D activity at SAC, but
there is no intent to retain this system at SAC and integrate it into
either PACER or a follow-on system as operational/production equipment
supporting the imagery exploitation mission.  SAC supports soft-copy
equipment as useful to the substantive intelligence gain, yet clearly
recognizes that the current costs of such equipment is excessive to that
which can be justified in support of their present mission and function.
Large numbers of soft-copy, high quality imagery display stations seems
well down on the priority list of "things-to-do" at SAC.

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SAC admitted to minimal interest on requirements for precise
mensuration except for a azimuth, coordinates and direction.  Their
present manual procedures seem adequate to their needs.  Finally, some
discussion concerning CATIS occurred with some PI's. Few seemed  aware
of this system.  Nor does CATIS (S) seem an alternative in consideration
of the present close working relationship of the PI's, all-source
analysts, and collection managers.  The access need to much of each
others information and the PHOTINT/ELINT integration, achieved thought
the PACER network data base structure currently operational makes them
think large scale ADP.  The CATIS system (or some "n" number of same)
could service the PI support activities of PACER or this function
currently planned for IDHS-80.  But it is unlikely that the resource
costs of IDHS-80 would be appreciably reduced in light of a decision of
this nature.  In conclusion, SAC has elected to remain a substantially
large-scale centralized ADP enviroment for the decade of the 80's.

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They will await the demonstration by some other organization of the
first major installation of what is now under serious examination as a
large-scale alternative, distributed computing and distributed data
bases.   They access and use the data of others but do not depend on this
data to support their mission.   SAC is not eager to provide external
interactive access to the data which they maintain, but they frequently
provide data to others in magnetic-tape form and through standard
electrical message formats.

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Attachment: a/s

Distribution:
  Orig:
  Copy

5 RM Registry
6 File    Has attachment
7 File    has attachment
8 File    has attachment

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# TOP SECRET

1. <u>Cross Reference</u>

    a.  Node Name:  Strategic Air Command (SAC)

    b.  Offutt Complex Participants:

        (1)  Headquarters, Strategic Air Command (SAC)

        (2)  544 Strategic Intelligence Wing (SIW)

    c.  ADP Systems

        (1)  Program-Assisted Console Evaluation and Review (PACER) System (Dual HIS 6080)

        (2)  System 70 (IBM 360/85)

        (3)  Operational Intelligence Support System (OISS) (5 AN/GYQ-21(V)s)

        (4)  Intelligence Data Handling System (IDHS) - 80

    d.  Telecommunication Systems

        (1)  AUTODIN

        (2)  Intelligence Data Handling System Communications - II (IDHSC-II)

        (3)  Special Purpose Communication Link (SPCL)

        (4)  Defense Dissemination System (DDS)

    e.  Incoming Data Bases

        (1)  Intelligence Reconnaissance Objectives File (IROF)

        (2)  Automated Intelligence Installation File (AIF)

    f.  Outgoing Data Bases

        (1)  IROF Updates

        (2)  Delegated Production Updates

    g.  Point of Contact:  SAC DCS/Intelligence, Directorate of Plans, Automation Division, INXA, AV 271-6170, Major F. Williams.

2. <u>Objectives</u>:

    a. The Joint Strategic Capabilities Plan includes the following mission objectives for the participants at this node.

        (1) Force Posturing: Protection of SAC forces.

        (2) Military Capabilities Planning: Development of the Single Integrated Operational Plan (SIOP), Limited Nuclear Options (LNO) and contingency plans.

        (3) Force Structure Planning: Definition of future force requirements.

    b. Offutt Complex Intelligence functions supporting above mission objectives span the entire intelligence cycle. Those functions related to imagery intelligence include:

        (1) Collection

            (a) Requirements Management

            (b) Collection Accountability

        (2) Exploitation

            (a) Exploitation Management

                <u>1</u> Requirements Management

                <u>2</u> Exploitation Tasking

                <u>3</u> Exploitation Accountability

            (b) Exploitation Operations

                <u>1</u> Imagery Interpretation

                <u>2</u> Dissemination of Interpretation Results

                <u>3</u> Mensuration Support

        (3) Production

3. <u>Program Participants</u>

    a. HQ SAC participating elements include:

2

(1) Deputy Chief of Staff (DCS), Intelligence manages SAC intelligence functions, including imagery-related activities.

(2) DCS/Data Systems manages, operates and programs computer systems handling intelligence information at the Offutt Complex.

b. 544 SIW exploits raw intelligence, analyzes all available sources of intelligence and produces imagery exploitation reports and finished intelligence for the Offutt Complex and selected worldwide consumers. The Special Security Office Communications Center operates the OISS communications subsystem.

4. Data Flow: Imagery data flow is graphically represented by the Imagery Data Flow Diagrams at Atch 1. The text will follow the diagram from left to right and from top to bottom.

a. Source nodes represent [ ] 25 providing raw imagery and associated ephemeris data to the Offutt Complex.

b. Inputs:

(1) System A provides daily inputs. Raw imagery is provided electrically and/or arrives by courier. Preliminary Exploitation (PE)/Current Exploitation (CE) reports and Exploitation Support Data (ESD) are electrically transmitted to the Offutt Complex via SPCL.

(2) System B and C provide inputs as available. Raw imagery (film) arrives by courier. Ephemeris is received by SPCL.

c. Collateral/Reference Data. The following sources/ products facilitate Offutt Complex imagery - related data handling functions:

(1) DIA

(a) IROF

(b) AIF

(c) Installation/Order of Battle files via Community On-line Intelligence System (COINS) through IDHSC-II.

(d) National Basic Reference Graphic (NBRG)

(e) Automated Tactical Target Graphics (ATTG) (produced by field commands)

(2) NPIC

3

IDHSC-II.

          (b)    Immediate Photo Interpretation Report (IPIR), Supplemental PIR (SUPIR) and Multi-mission PIR (MIPIR).

          (c)    Highlight Cables.

     (3)    Imagery-derived products from worldwide agencies such as: DIA, 497 RTG, 548 RTG, 9 RTS, and FICEURLANT which may include:

          (a)   IPIR

          (b)   SUPIR

          (c)   MIPIR

          (d)   Periodic Summaries

          (e)   Basic Imagery Interpretation Briefs and Reports (BIIB & BIIR).

          (f)   Direct Support Imagery Interpretation Briefs and Reports (DSIIB & DSIIR).

     (4)    Imagery-related intelligence requirements generated by Offutt Complex agencies.

   d.   SAC Imagery Data Handling Functions (Discussion of functions will follow order of paragraph 2b. above):

     (1)    Imagery collection requirements management begins with identification of requirement by SAC Intelligence or 544 SIW to the SAC collection manager (INCR).  Validated requirements are then entered into the SAC IROL.

          (a)    If time-sensitive need, Ad Hoc requirement submitted to DIA/CCF.

          (b)    If continuing need, submitted as new standing requirement to DIA/DC-5.

          (c)    Offutt Complex requirement status returned from DIA via IROF tape.

     (2)    Imagery collection accountability is determined by continuously comparing SAC requirements data with imagery exploitation results (to be discussed later) to determine requirement satisfaction.

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(3) Exploitation requirements management begins
with correlation of ephemeris data with SAC IROF exploita-
tion requirements to determine which SAC objectives have been
imaged.

(4) Pre-loading and category summary reports are
produced to assist exploitation managers in the assignment of
imagery interpretation tasks by section. Outstanding require-
ments are queued for presentation to the appropriate imagery
interpreter on a terminal format.

(5) Exploitation accountability is determined by
comparing exploitation requirements with imagery interpreta-
tion results (to be discussed below).

(6) Imagery interpretation begins with notice of
film arrival and interpreter review of exploitation responsi-
bility.

(a) Interpreter reviews his tasked installations
at his PACER terminal, noting those due a report.

(b) Known descriptions of the installations
and Essential Elements of Information (EEI) are reviewed.
PACER-stored descriptions, from DIA AIF and previous interpre-
tation results, including PE/CE reports, are reviewed.

(c) The interpreter may also review hard copy
installation data, contained in IPIR, SUPIR and MIPIR from
various sources, or from BIIB or BIIR. For ground force
related installations, NBRGs/ATTGs are reviewed and referenced
in PI reports per DIAM 57-5.

(d) COINS files may be queried, via OISS ter-
minal, for various data such as additional imagery interpre-
tation reports and installation data.

(e) After reviewing all known data, the interpre-
ter views image on film and enters appropriate data into a
preformatted PACER screen display.

(f) For any installation not requiring a report
the interpreter reviews the imagery and normally creates a
report if status changes are noted. Otherwise the installation
is indexed, providing record of coverage.

5

(g) For airfields, an "R-95" annotated graphic is prepared for JSTPS target development. This report assists weapon allocation/damage assessment efforts.

(h) On a weekly basis, all locally created interpretation reports are consolidated into a hard copy "Dry MIPIR". The Dry MIPIR is used by exploitation managers to prepare final MIPIR for dissemination.

(7) Final MIPIRs are produced and disseminated to selected worldwide consumers through AUTODIN transmission, hard copy, or courier tape. Consumers include DIA, 497RTG, 548RTG, 9SRW, FTD and USEUCOM.

(8) Production interpretation reports are also used as sources for the following finished intelligence:

(a) Items of current intelligence interest for briefing to SAC Staff.

(b) Direct Support Imagery Interpretation Briefs (DSIIB) and Reports (DSIIR) for SAC and worldwide consumers.

(c) Delegated Production updates for SAC areas of responsibility, including Air and Missile Orders of Battle (OB). Updates are transmitted weekly: AIF data via AUTODIN and OB data via IDHSC-II. OB and airfield changes may also affect updates to the National Target Base and the Consolidated Air Defense Order of Battle, which are used in Single Integrated Operational Plan development.

(d) Special reports may be sent to various worldwide consumers describing new substantive intelligence based on interpretation results.

e. Imagery data flow outputs and receiving nodes are summarized as follows:

(1) Special reports of new substantive intelligence resulting from imagery interpretation efforts are disseminated, as available, to various worldwide consumers as AUTODIN messages.

(2) Imagery collection requirements are submitted to DIA in DD Form 1684 format.

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(a) Ad hoc requirements are submitted as required by AUTODIN message.

(b) Standing requirements are forwarded weekly by AUTODIN.

(3) Direct Support Imagery Interpretation Reports and Briefs, (DSIIB) and DSIIR) are disseminated as hard copy products to selected worldwide consumers.

(4) Multimission Photo Interpretation Report (MIPIR) disseminated weekly via electrical transmission, hard copy, or magnetic tape to selected worldwide consumers.

5. <u>Products</u> are discussed in previous Data Flow section.

6. <u>Timelines</u> are discussed in Data Flow section.

7. <u>ADP-T Support Utilized</u>:

a. ADP Support is presented in the table at Atch 2.

b. Telecommunication Support is outlined in table at Atch 3.

8. Future Imagery Data Flow (through 1985):

a. Current planning anticipates performance of same functions in future as listed in paragraph 2b.

b. Major difference in future data flow is increased use of ADP and telecommunications.

(1) All ephemeris data to be electrically transmitted.

(2) Most internal Offutt Complex data to be reviewed at computer terminal.

(3) Most products to be disseminated electrically by message or bulk data. Maximum use of AUTODIN II. Maximum information resource and analysis tools will be integrated into a single work station.

(4) PACER and System 70 to be replaced by IDHS-80.

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ADP SUPPORT

| FUNCTION | SUBSYSTEM | HOST COMPUTER |
|---|---|---|
| Collection Requirements Management | Collection Management | PACER/System 70 |
| Collection Accountability | Photo Interpretation (PI) | PACER |
| Exploitation Requirements Management | PI | PACER |
| Exploitation Tasking | PI | PACER |
| Exploitation Accountability | PI | PACER |
| Imagery Interpretation | PI | PACER |
| Dissemination of Interpretation Results | PI | PACER/System 70 |

Atch 2

## TELECOMMUNICATION SUPPORT

FUNCTION                                        COMM SYSTEM

Collection Requirements Management              AUTODIN

Collection Accountability                       Mailed Tape

Exploitation Requirements Management            Mailed Tape

Exploitation Tasking                            Internal

Exploitation Accountability                     Internal

Imagery Interpretation                          Internal

Dissemination of Interpretation Results         AUTODIN/Courier Tape

Atch 3

7n.   PACER

    a.   Cross Reference

        (1)   Collection Management Subsystem

        (2)   SAC/ADOIO - automation

        (3)   SAC/INCR - User

        (4)   ADP System Utilization

           - 2% of all On-line activity

             5% of Production (batch) processing

             8% of Data Base

        (5)   Telecommunication System Utilization

           - Secure Phone (to DIA/CCF)

           - Autodin

           - IDHSC-II (Soon)

        (6,&7)Product, Support Data Base

           - All source, integrated PACER data base

        (8)   Capt Valusek, Hq SAC/INXA, Offutt AFB, Ne 68113

           Auto 271-2515/6170

    b.   See data flow slides

    c.   ADP Functional Justification

        SAC must perform imagery collection management
in order to provide intelligence input to production of
the National Target Base and Consolidated Air Defense
Order of Battle for military capabilities planning,
including SIOP development, contingency planning and
limited Nuclear Option Planning.  Military capabilities
planning, and ADP support, thereto, is specifically tasked
to SAC by the JCS via the Joint Strategic Capabilities Plan.

7. n. PACER

   a. <u>Cross Reference</u>

      (1) Photo Interpretation Subsystem

      (2) SAC/ADOIO - Automation

      (3) 544/IEP - User

      (4) ADP System Utilization

        - 55% of all On-line activity

        - 20% Production (batch) processing

        - 40% Data Base

      (5) Telecommunication System Utilization (thru OISS)

        -Special Purpose Communication Line (SPCL)

        - Autodin (Soon)

        - IDHSC-II (Soon)

      (6,7) Product Data Bases

        - All source, integrated PACER data base

      (8) Capt Valuske, Hq SAC/INXA, Offutt AFB, NE 68113
        Auto 271-2515/6170

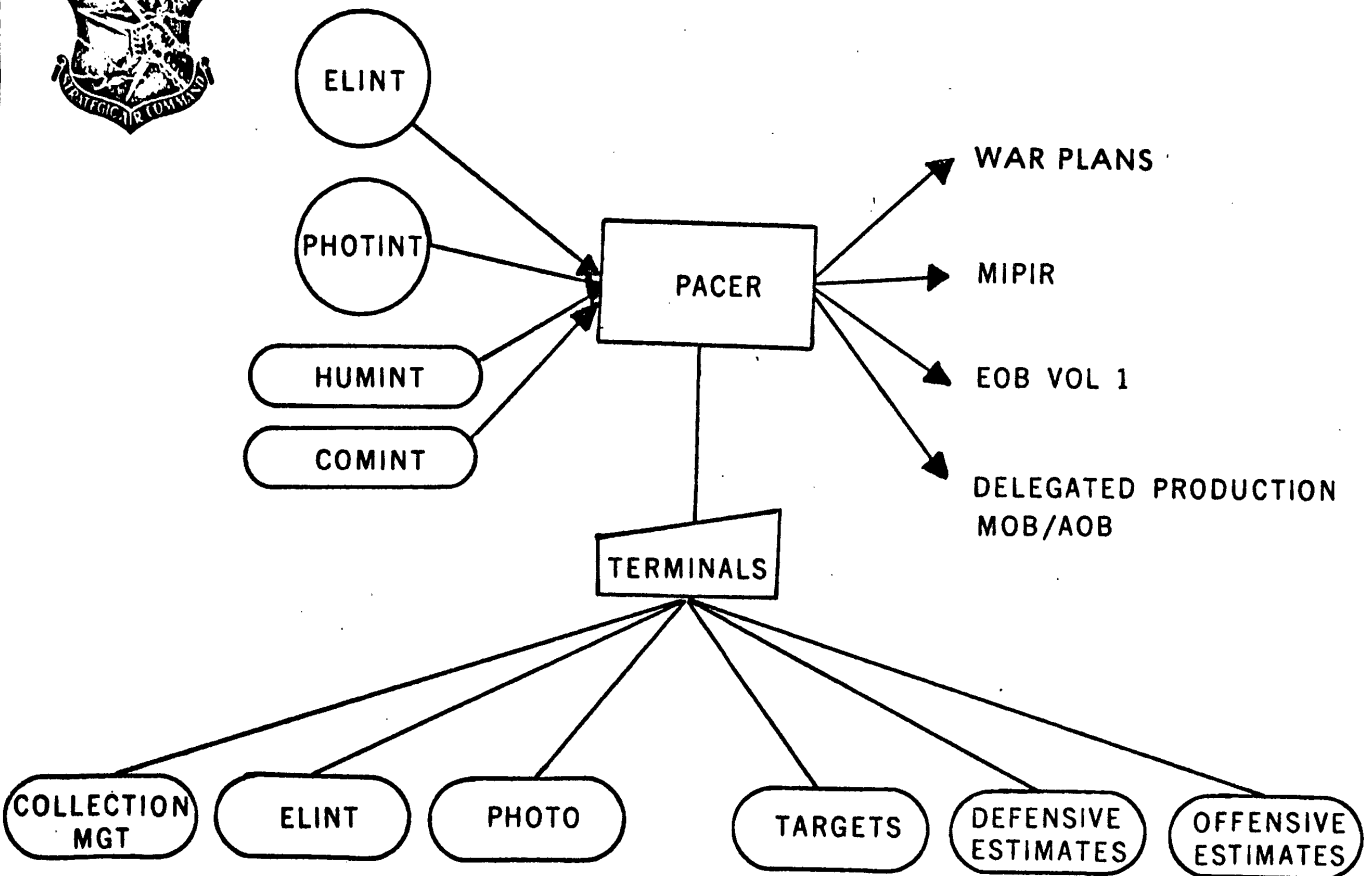   b. See data flow slides

   c. ADP Functional Justification

This subsystem is one of six that are completely interdependent. This subsystem and the ELINT processing subsystem represent the first step of a data flow that transform raw intelligence data into finished targeting and order of battle information. The entire system produces the intelligence input for the nation's war plan and is vitally dependent on the interactivity of the six subsystems to process the volumes of dat input to the system. War

planning, and specifically, ADP Support thereto, is tasked

to SAC by JCS via Joint Strategic Capabilities Plan (SSCP).

**UNCLASSIFIED**

ELINT

PHOTINT

HUMINT

COMINT

PACER

WAR PLANS

MIPIR

EOB VOL 1

DELEGATED PRODUCTION
MOB/AOB

TERMINALS

COLLECTION
MGT

ELINT

PHOTO

TARGETS

DEFENSIVE
ESTIMATES

OFFENSIVE
ESTIMATES

**UNCLASSIFIED**

UNCLASSIFIED

# PHOTO INTERPRETATION SUBSYSTEM



FUNCTIONAL USERS

PHOTO PROFILES.

PHOTO DISSEM QUEUES

ESD

ESD

PACER DATA BASE

PI HISTORY

MIPIR

DP SUPPORT

EXPLOIT SCAN & IROL

ELINT TIPOFF

REVIEW & VALIDATE
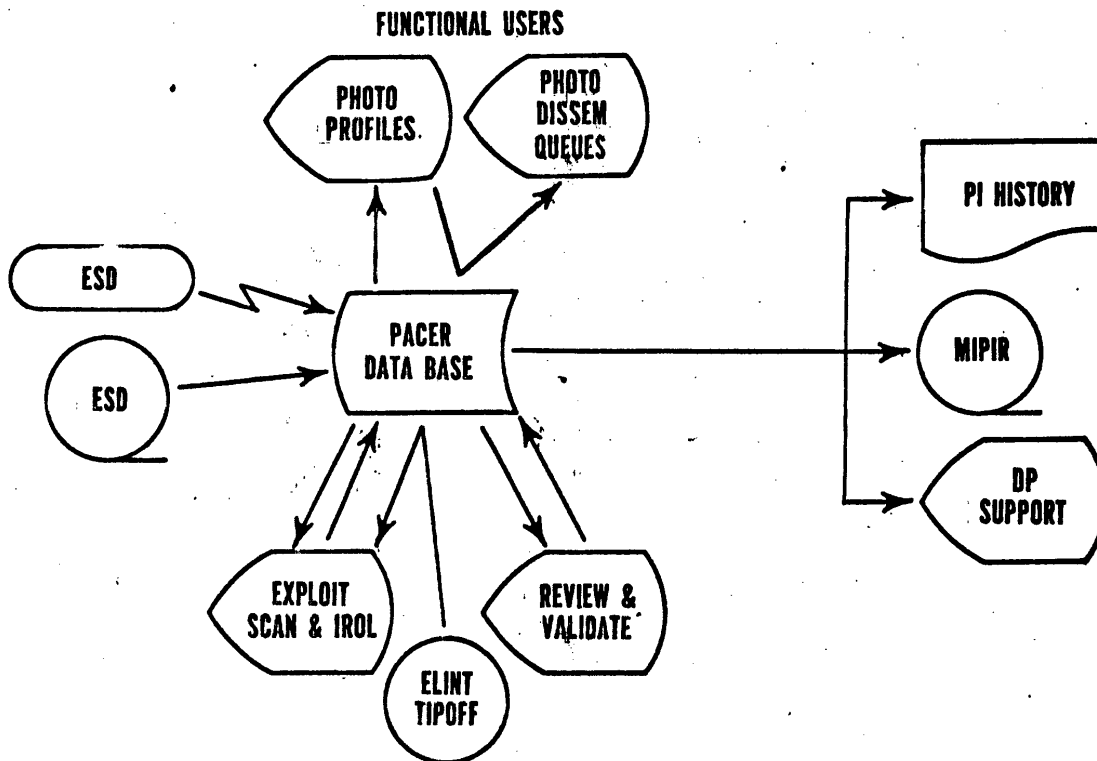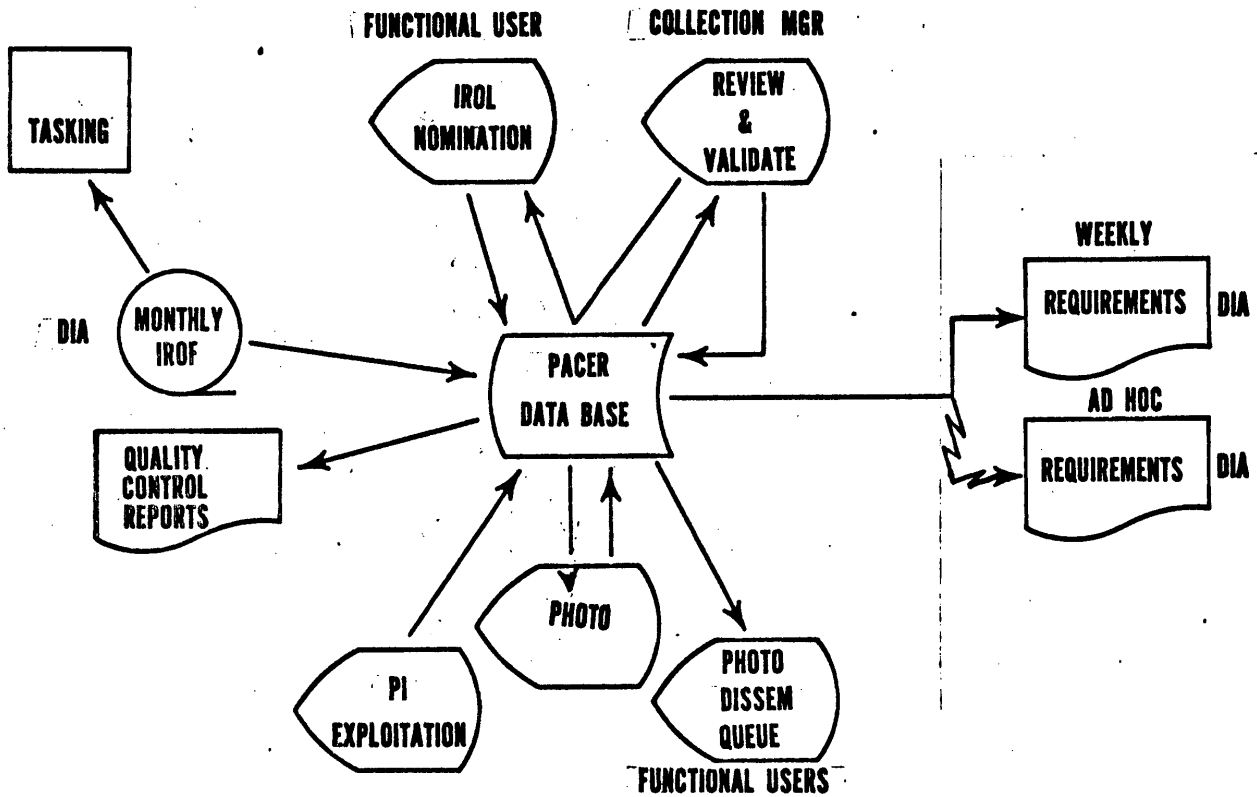
UNCLASSIFIED

UNCLASSIFIED

# COLLECTION MANAGEMENT SUBSYSTEM

# PACER DATA BASE
## (PI - 5L)
## AS OF 1 OCT 1977
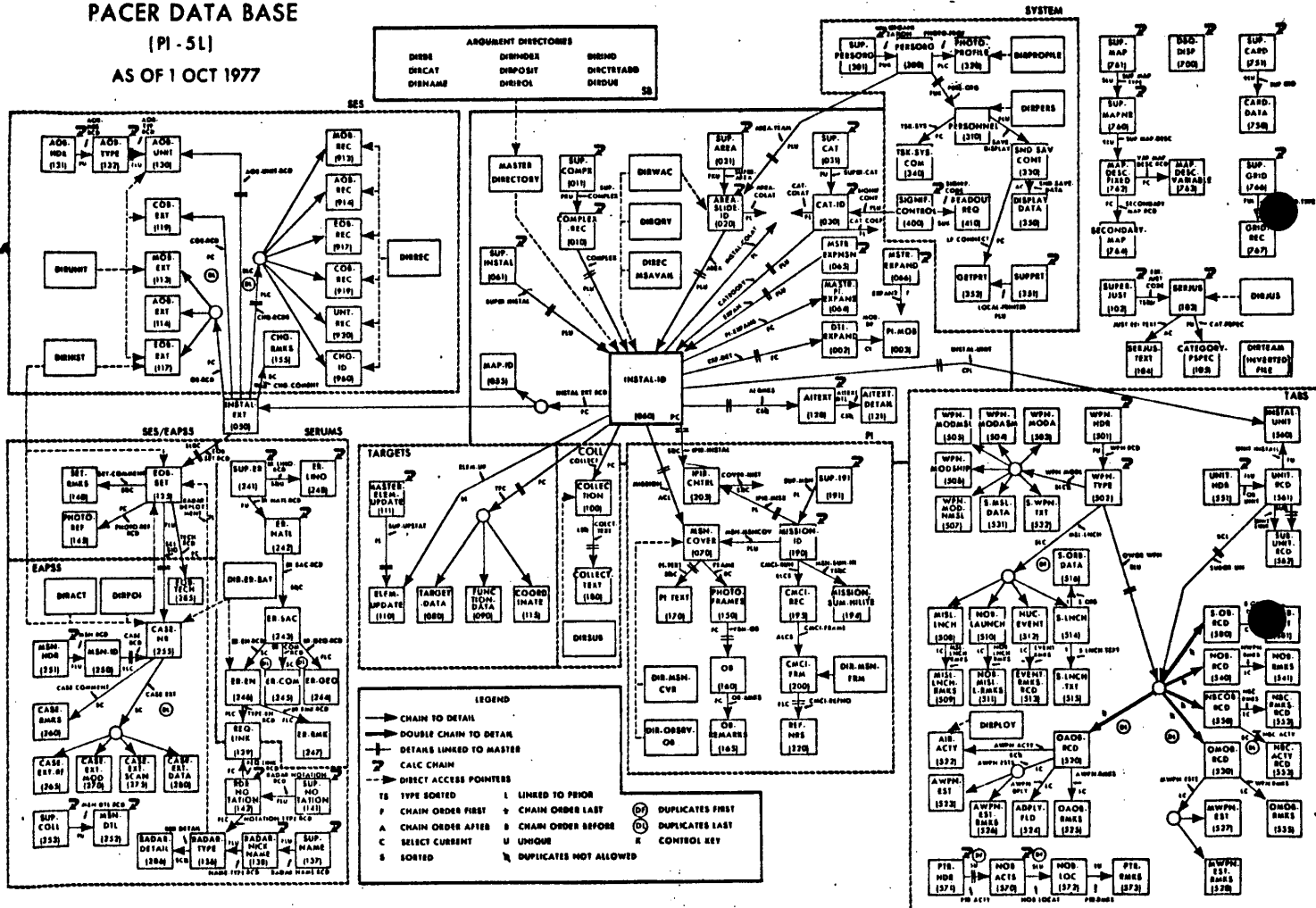
1979

| COMMANDER (CC) - 2F16 | | |
| --- | --- | --- |
| ...nel David D. Anderson | 2832 | 731-3459 |
| s. Johnson, Secretary | 2832 | - |

| OF THE VICE COMMANDER (CV) - 2F16 | | |
| --- | --- | --- |
| ...nel Charles R. Fox | 3722 | 292-6981 |

| IVE (CCE) - 2F16 | | |
| --- | --- | --- |
| Colonel Hoye | 3722 | 734-3175 |
| t Coffey, Assistant | 3174 | 291-9138 |
| t Fontenot, Historian (2F23) | 2663 | 1-296-5232 |

| ENLISTED ADVISOR (CMS) - 2F16 | | |
| --- | --- | --- |
| gt Hulsey | 5364 | 291-0182 |

| COMMANDER FOR OPERATIONS (DO) - BB16G | | |
| --- | --- | --- |
| onel Glenny | 2805 | 291-7990 |
| t Col Hazlett, Assistant | 4484 | 292-5329 |
| aj Staringer, ELINT | 4484 | 734-2073 |
| apt Strawn, Photo | 4484 | 292-4557 |

| STRATION DIVISION (DA) - 2F18 | | |
| --- | --- | --- |
| Colonel Vitton, Chief | 2038 | 291-1803 |
| MSgt Lara, Deputy | 6470 | 292-3648 |
| Sgt Richardson, Chief Admn Spt | 3174 | 292-2311 |
| Sgt Germanson, Doc Manager | 6470 | 331-3265 |
| Sgt Pacewicz, Admin Comm & Pstl | 6140 | 291-0351 |

| ICATION SERVICES DIVISION (DC) - Bldg 501 | | |
| --- | --- | --- |
| t ...yrick, Chief | 2214 | 895-1548 |
| Sgt Evans, Deputy | 2214 | 291-4229 |
| Sgt Pace, NCOIC OSP | 2214 | 292-0989 |
| Sgt Sundeen, Crypto Acct/Trg | 5570 | 733-8856 |
| Sgt Novak, SSO Auto Com-Ops-SRC | 2214 | 292-1450 |
| Sgt Nigh, Traffic Analysis/Pubs | 2214 | 291-0332 |

| TCS DIVISION (LG) -Bldg D | | |
| --- | --- | --- |
| or Lamb, Chief | 5186 | |
| MSgt Posey, NCOIC | 5186 | 291-4329 |
| Sgt McFadden, Administration | 5186 | 291-7773 |

| ef of Maintenance (LGM) | | |
| --- | --- | --- |
| MSgt Hall, Chief | 5110 | 291-8624 |
| MSgt Blair, Maint Supt | 4005 | 291-4883 |
| Sgt Wilson, Maint Control | 5372 | 219-2473 |

| CE MANAGEMENT (RM) - 2E14 | | |
| --- | --- | --- |
| Lowry, Chief | 4555 | 331-5883 |
| apt Bernstein, Mgmt & Budget | 4331 | 291-5450 |
| Sgt Moore, Management Analysis | 4331 | 294-5814 |
| SMSgt Douglas, Personnel | 4555 | 292-5160 |
| Sgt Wells, Administration | 4555 | 292-6138 |
| Sgt Price, Equipment | 4555 | 291-4238 |

| CTORY DIVISION (TJ) - 1G6 | | |
| --- | --- | --- |
| or Kendrick, Chief | 2331 | 292-2481 |
| aj Alles, Deputy | 2330 | 734-4252 |
| Sgt McAtee, Administration | 2330 | 292-5892 |
| apt Gillis, Analysis Branch | 2482 | 331-5482 |
| apt Prola, Minuteman III Br | 4560 | 291-0291 |
| a... anee, MM II/Titan II | 6042 | 291-3723 |
| ap... nor, Production Branch | 4403 | 291-9329 |

| UARTERS SQUADRON SECTION (CCQ)-- Bldg 526 | | |
| --- | --- | --- |
| t Starnes, Commander | 5815 | 291-4277 |
| Sgt Talley, First Sergeant | 5814 | 366-2753 |

| Administration | | |
| --- | --- | --- |
| t Fred, Executive Spt Officer | 5814 | 731-9512 |
| Sgt Jenkins, NCOIC | 5814 | 339-8488 |

| 544 INTELLIGENCE ANALYSIS SQUADRON - 2F23 | | |
| --- | --- | --- |
| Lt Col Anselmo, Commander | 2247 | 292-4356 |
| Lt. Col Ross, Operations Officer | 2996 | 426-5334 |
| Mrs. Walters, Secretary | 2930 | 734-2745 |
| MSgt Podoll, First Sergeant | 2930 | 292-2872 |

| Unit Administration (CCE) - 2F23 | | |
| --- | --- | --- |
| 1Lt Christensen, Exec Spt Officer | 2930 | 292-6423 |
| MSgt O'Flaherty, NCOIC | 2650 | 292-4425 |
| TSgt Morgan, Training | 2650 | 292-6801 |
| Estimates Branch (IAE) - BB16 | | |
| Lt Col Carteaux, Chief | 4898 | 291-7955 |
| Applications Branch (IAA) - BA-3 | | |
| Lt Col Haupt, Chief | 2153 | 592-2875 |
| Targets Branch (IAT) - BB16 | | |
| Lt Col Smith, Chief | 4950 | 331-8052 |
| Library Branch (IAL) - BB16 | | |
| MSgt Brewer, NCOIC | 6140 | 291-6071 |

| 544 INTELLIGENCE EXPLOITATION SQUADRON - 2E12 | | |
| --- | --- | --- |
| Lt Col O'Lear, Commander | 6015 | 731-0241 |
| Lt Col Ditch, Ops Officer BA3 | 2285 | 339-9131 |
| Mrs. Hudson, Secretary | 6015 | 554-1326 |
| MSgt Sullivan, First Sergeant | 5279 | 292-0249 |
| Maj Reppe, Plans & Programs BA3 | 2285 | 592-1672 |

| Unit Administration (CCE) - 2E12 | | |
| --- | --- | --- |
| Capt Cash, Exec Spt Officer | 5209 | 291-5184 |
| TSgt Carter, NCOIC | 4787 | |
| MSgt Robertson, Training | 5279 | 895-3064 |
| ELINT Processing Branch (IEE) - 2G6 | | |
| Lt Col Somma, Chief | 3622 | 339-9131 |
| Imagery Interpretation Branch (IEP) - BB18 | | |
| Lt Col MacCraw, Chief | 2002 | 291-4355 |

| 544 TARGET MATERIALS SQUADRON - Bldg D | | |
| --- | --- | --- |
| Lt Col Baulch, Commander | 5689 | 292-2916 |
| Lt Col Walton, Ops Officer | 3266 | 292-2348 |
| Mrs. Strickler, Secretary | 5689 | 292-2936 |
| MSgt Robinson, First Sergeant | 4872 | 731-2897 |

| Unit Administration (CCE) | | |
| --- | --- | --- |
| Capt Brice, Exec Spt Officer | 2526 | 291-2433 |
| SMSgt Kent, NCOIC | 2526 | 291-6027 |
| TSgt Johnson, Training | 4833 | 291-8635 |
| Air Target Materials Branch (TGOM) | | |
| Lt Col Walton, Chief | 2040 | 292-2348 |
| MSgt Crompton, NCOIC | 3070 | 292-1291 |
| Photo Services Branch (TGOP) | | |
| Maj Douglas, Chief | 2311 | 292-3165 |
| SMSgt Haga, NCOIC | 2311 | 1-296-4323 |
| Material Management Branch (TGOR) | | |
| Capt Ratkewitz, Chief | 4852 | 292-3263 |
| SMSgt Oxford, NCOIC | 4852 | 291-5783 |
| Special Activities Branch (TGOS) | | |
| Maj Shultz, Chief | 3056 | 292-2749 |
| MSgt Darby, NCOIC | 3056 | 292-5610 |
| Visual Presentation Branch (TGOV) | | |
| Lt Hilton, Chief | 3935 | 292-3145 |
| SMSgt Doran, Supt | 3935 | 292-3716 |
| Photo Work Order Desk | 5021 | |
| Graphics Work Order Desk | 2664 | |
| Production Management Branch (TGOX) | | |
| MSgt Fowler, NCOIC | 2279 | 291-4773 |

| DET 1, 544 ARTW, Bolling AFB, DC 20332  (AV 297) | | |
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| Lt Col Hooper, Commander | 5336 | (703) 971-0749 |
| TSgt Kennedy, Admin | 4327 | (202) 248-4211 |

| SPECIAL STAFF | | BRIEFINGS/TOURS | |
| --- | --- | --- | --- |
| Capt Coffey (OI) | 3174 | SrA Thompson, Coord | 3174 |
| Capt Fred (Jr Off Co) | 5814 | ADAGE | 5022 |
| Capt ...ghton, Soc... | 2566 | PACER | 2596 |
| Capt Cuesta (SE) | 4899 | ... | 5254 |
| Lt Col Vitton (Security | | Trajectory | 3364 |
| Manager) | 2038 | BB20 Schedule | 2625 |

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CPYRGHT

# Fight Flares On Computer Fire Safety

### By Ted Knutson
Special to The Washington Post

Some key federal computer people are getting ready to take on the General Services Administration in a fire extinguisher fight.

Your next check from Uncle Sam is part of their ammunition.

Last year the GSA reaffirmed its long-standing mandate that sprinkler systems be used almost exclusively to protect federal computers from fire.

And recently GSA's accident and fire protection director, Dr Miasch, said, "We are sold 100 percent on sprinklers."

The wisdom of that policy is being called into question increasingly by major federal computer users, particularly after the sprinklers at the Census Bureau's computer center in Suitland went off accidentally on Aug. 8. That incident cost the Census Bureau more than $200,000, and two of its major computers still are incapacitated. It has caused some federal computer officials to wonder if the answer to fire protection is a gas, Du Pont's Halon 1301.

The latest flooding of the Census facility, however, has not been water but an onslaught of computer operators from nearly every major federal agency who are interested in getting information to support the installation of Halon in their own data rooms, according to Census computer chief Thomas DiNenna.

The agency that writes nearly all government checks, the disbursements division of the Treasury Department, began its inquiry earlier this year into whether to use Halon.

Officials from the eight federal disbursement centers across the nation saw a demonstration of the Halon system in May at a meeting in St. Louis.

Since then, disbursements has begun a study—due Dec. 15—on its entire computer security operations, including fire safety. One official said he expects the report will recommend Halon for any new buildings the agency might move into, but he doubts if the report would call for adding the system to present facilities.

Disbursements chief Robert Burrill said he's worried about sprinklers because they could "damage the equipment, damage the tape and the whole works."

Just the operation of the sprinklers alone could delay checks, although there are backup systems and duplicate files in most instances.

Census computer chief DiNenna said the problems caused by water in his computers are similar to what would happen if you used water to put out a fire in your television: rust, corrosion and shorts and, because water is a good conductor, electricity would be going places it shouldn't.

Because the sprinklers most often are activated when temperatures at the ceiling reaches 160 degrees Fahrenheit, damage may occur even before the sprinkler system reacts.

"By the time the sprinklers go off, we know that piece of equipment is gone," said Jack Barritt, a fire engineer of the National Fire Protection Association committee that writes computer fire safety standards for the national fire code.

Halon systems react faster than water because they usually are activated by smoke detectors, and Halon proponents say the substance doesn't damage the equipment.

But they remain in the minority of the leadership of the National Fire Prevention and Control Administration which wrote the GSA's bible on computer safety, the standard practice for the fire protection of essential electronic equipment operations, commonly known as RP-1.

In two pages giving the rationale for the preferred use of water, the report states water is the best protection against "major catastrophe."

Edwin West Jr., a NASA aerospace engineer and chairman of the NFPCA committee that wrote the report, said water prevents the rekindling of a fire by staying in place and removing heat, which Halon doesn't do. He also characterized Halon as potentially toxic, but a quick survey of major federal health agencies didn't reveal any instances where Halon gas had injured someone during a fire.

Ed Murphy, a spokesman at the Center for Disease Control in Atlanta, said the Navy has some studies showing that Halon could cause respiratory irritation, but he characterized the problem as slight.

West said the Census accident doesn't diminish the value of sprinkler systems because it was caused by human error. He said he has heard from investigators that the accident was caused by someone accidentally turning on a water valve and because sprinkler heads that should have stopped the flow of water in the absence of heat hadn't been installed properly.

Most computer fires have started outside of the central unit. There are documented cases of arson where a fire has started in an adjacent room.

The GSA's major objection to Halon appears to be cost. Halon systems usually cost nearly double water sprinkler systems. Halon also has to be recharged after every use, and one official said there is no way to test the system without depleting the gas.

Those who promote Halon contend, however, that the extra cost—amounting in the low tens of thousands—is worth it to protect a million-dollar computer.