11 Sept 1968

[   ] Memo to Briggs sub: Thoughts on OCS and Agency ADP, S, Unno'd.

Where does OCS belong? We are in the S&T Directorate as a result of an opportunistic coincidence. Wheelon recognized advantage of adding computers + people to his S&T Directorate.

OCS being in S&T rather than Support had very little effect on OCS policies and functions. Initial concerns over S&T Office having access to Agency-wide data would have been the same, one Directorase vis-a-vis another. OCS growth may have benefited from being in a new, and less bureau= cratic directorate.

Centralization:

The current Information Processing Coordination set up exercises a loose control over the Agency's ADP.

[   ] felt the decentralization to directorate level could be justified due to volume of work in each; also with decen- tralization, each Directorate wld have to justify its own expenditures in ADP & live with any shortcomings in the service. Then the IP Staff wld have to function in a stronger guidance role.

EMSEC

(T)

25 Sept, 1968

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use of Dataport -

Sept. 1968 — OCS learned that O/C was being given resp. for em. evaluations since O/C was being urged to ensure + deal information problems + security did not have approp. skills + expertise Scope was to include all office + computer equipment.

OCS - ADP Trg. Staff

Support for
Trg. activities being ~~discussed~~ planned -

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memo 3 Oct 68 discussing support
which OTR willing (able) to furnish
+ support OCS must organize -

TSS

1st dozen terminals on OCS Time Sharing
System installed by [last] of XII.1968
+ guidelines for obtaining time sharing
service prepared by OCS for Ch/IPS/PPB
Approval (6 Nov.1968)

CTB

memo to D/CI

15 Nov 1968

- recommended a system of computer time budgeting be instituted in order to check time used by various customers & to adjust budgets as necessary, & thus be able to provide a basis for allocating & scheduling computer time, & to planning better by both OCS & the customers.

19 Nov, 1968

Contract Info. Engineers –

DD/S&T need for remote to satisfy DCI
shld be controlling motive for making
the system work, not just to give
Proj. Officer assistance, which he hasn't
asked for –

Briggs, memo to DD/S&T – S –

OSI request for time-sharing service   26 Dec 1968

With increased capabilities in prospect for 1969 with the
introduction of the IBM 360/67, the D/SI wished to increase
the educational effort among OSI analysts in use of remote
terminals. The Defensive Systems Division of OSI had pre-
viously been serviced in a number of programs by OCS and
the D/SI felt that ;use of remote terminal wld improve
interaction between his analysts and the computer, and
permit immediate reaction, rather than obtaining results
in a matter of hours or even days.

Chamberlain requested two terminals - one in 6-G-20 to serve
approx [   ] of the D/SI's immediate staff;
and another in 4-G-04 to serve [   ] in 3
branches of DSD & LSD. PSED and NED are negotiating with
OEL to share terminals set up for OEL use.

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While terminal use initially might be low for OSI, the education
of OSI analysts in use and advantages of ADP would doubtless
cause a dramatic increase in a few months.

OSI still desired to have OCS support in systems analysis
and programming especially for initiating new programs.
This support wld also increase gradually with use of terminals
become Security of material on remote to SI/TK initially &
          will allow more restricted classifications later.

Calendar 1968

BACKGROUND FOR DCI ACCOMPLISHMENTS REVIEW

I. People: Since the Dec 1967 report, the professional and technical cadre building effort showed increasing payoff. Recruiting channels netted an additional [ ] making the on-board increase from the beginning of FY 67, when the push began, a total of [ ] Our full-time 16-Week programmer training course for beginners included some [ ] intermediate level training was given to [ ] and the ADP Orientation Course, which we inherited from OTR, included [ ] users/managers. The end result of all this is that we now have:

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. A balanced capability across a full range of techniques.

. A sound, if modest, support to S&T activities--against practially no S&T capability 2-3 years ago.

. Good esprit de cxorps.

. Improved perspective on the part of customers.

. Better informed managers now involved in making ADP decisions.

. Responsive rather than a sales environment.

IIMachines: During the reporting period the last of the 2nd generation equipment was released [ ] multiple tasking in a single system began and some [ ] terminals began operating in a time-sharing environment--the start of what may well be a major change in analyst/manager processing of files of data. Also a computer/communication link was established with OSP for on-line command and control support, presaging the future. Renovation of the C/C began in accord with space plans approved 2-1/2 years ago. Capacity to handle the burgeoning requirements was reflected in a 72% increase in jobs handled by the IBM systems over 1967.

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III. Conclusions: Although some major problems, and management issues, remain, the basic policy approach toward an ADP-supported future, taken in FY 67, is bearing fruit. Costs will continue to rise but the cost per unit of support will continue to decrease. There is no reason to believe that we won't see here a pattern like that reflected by the [ ] in its 5-Year ADP Study, viz., a 70-fold increase in requirements at an estimated 5-fold increase in cost.
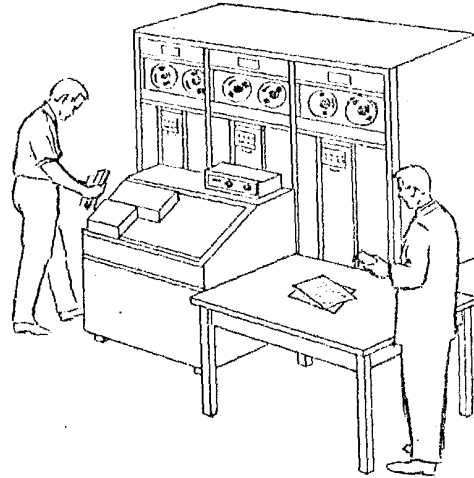
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COMPUTER SCIENCE TRAINING

To meet the increased demands
for competence in all aspects of
automatic data processing and to
reduce the cost of achieving this
competence a total program of
internal training in computer science
for Agency personnel has been designed. Many parts of the program
have been fully implemented. At present, the major parts of the
program are ADEPT (A Developmental EDP Professional Training)
Program, MICOT (Miniaturized Computer Technology), General ADP
Orientation, User Analysts Systems Orientation, and Using Interactive
Systems.

ADEPT

The ADEPT Program is designed to produce EDP professionals
thoroughly competent with the IBM-360 system. The basic course
is a 16-week course which trains the beginner to use the IBM 360 at
the journeyman level of proficiency. Assembly, procedural, and job
control languages are taught and the final weeks of the course include
modular programming and programming design of medium size systems.
The better graduates should be able to assume responsible professional
roles within several months of graduation. Two basic courses are
given per year, one in September and one in February. The fifth class
will graduate in December 1968. The intermediate program consists
of a series of courses which are designed for journeymen programmers
and are meant to reinforce his present skills. Topics which provide
the student with material useful in his daily assignments are addressed.
These courses are advertised in the OTR Bulletin and each course is
offered every 12 - 18 months. The senior program consists of courses
which are not necessarily related to immediate problems. They are of
an advanced nature and are comparable to those given at the graduate
level in the computer science curriculum of major universities.
Examples are topics such as operating systems, Real-time system

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design, and Language Processor Design and Development. The first of these courses will be offered in early 1969.

MICOT

MICOT is a program designed to train programmers and users of miniaturized computers such as the IBM 4Pi. MICOT training consists of a two-week basics course focused specifically upon miniature computers for users, and a detailed fundamentals and programming course for designers, programmers, and installers. Several ad hoc courses have been given by using instructions furnished by the manufacturer. A regular schedule of such offerings is being planned for 1969.

General ADP Orientation

The most popular of the courses offered under this generic is the three-day ADP Orientation given six to nine times per year. Other orientation which may be required for special purposes is available upon request. As an example, a 30-hour course is being prepared for personnel who are located in areas which have terminals on-line to the OCS Interactive Systems.

User Analysts Systems Orientation

This program includes various depth courses on the systems development process. The most popular is the three-day course, "The Systems Development Process," offered by Brandon Associates. It has been given approximately four times per year. Another two-week course has also been given. This total program is being evaluated to meld better into Agency requirements.

Using Interactive Systems

This program is designed for analysts who will be using remote terminals attached to the OCS Interactive (Time Sharing) Computer System. Usage of such problem-oriented languages as SOLVE, TORQUE, LINUS, and DESKCAL is taught. Conversational systems, on-line file structures, user language processors, and interactive computational constraints are included as topics. In addition to the several tutorials which are presently being given, formal courses will be given after the installation of the IBM 360/67 interactive system in January 1969.

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Use of EDP is expanding very rapidly in the Agency. The installation of terminals in the user areas which puts the full processing and computational power of the system within arms reach of the user undoubtedly will stimulate still another surge of growth. Eventually, most Agency employees will be in some contact with computers and their products. Agency ADP training plans to educate qualified employees from all Directorates to an understandable and useful level. Schedules of all courses will be published in the OTR Bulletin. Training Officers should be consulted for information on registration procedures.

HE IS THE VERY MODEL

"The designer is essentially a solver of problems, problems presented to him by the nature of the task, of the materials he is using, of the people who will be using his design, and of the market for which it is being produced.

"The model of man which emerges when we consider him as a problem solver - whether his problem is to land an aircraft or design a coffee percolator - is a data processing model. These words are operational, they define concepts in terms of what is done.

"Man is seen as a hierarchy of systems in which he receives data, processes data, and puts out data . . .

"This does not imply in any way that a man's mind works like a digital computer - though it does not deny the possibility. It does say that the relations between what goes into his head through his eyes and ears and what comes out through his voluntary muscles, often suggests what he does."

E. LLEWELLYN THOMAS
"Problem Solving in Design"
from Design and Planning,
Hastings House, New York, 1965

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