MASSACHUSETTS INSTITUTE OF TECHNOLOGY *CAMBRIDGE, MASSACHUSETTS 02139*
Information Processing Center
39-427

TO: Professor J. H. Saltzer

FROM: J. R. Steinberg

SUBJECT: November 21 Meeting of USA Standards Institute Committee

DATE: November 14, 1968

MIT is acting as host to the November 20-21 meeting of the X3.8 Committee of USASI, which will be meeting in room 39-530. The chairman, Mr. Perry Crawford, Jr. has requested that we arrange locally for several presentations to the Committee to take place during the morning of Thursday, November 21.

The following is a confirmation of the schedule that we have worked out with the speakers:

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| 9:00 - 9:15 | Professor J. C. R. Licklider |
| 9:15 - 10:00 | Professor F. J. Corbato, or<br>Professor J. H. Saltzer |
| 10:00 - 10:45 | Mr. W. D. Matthews |
| 10:45 - 11:30 | Mr. J. Burrows |
| 11:30 - 12:00 | Professor I. Pool |

I am enclosing a document indicating the areas of interest of the Committee.

Mr. Crawford asks us to convey his thanks to the speakers for agreeing to assist the Committee in this way.

cc: Mr. Perry Crawford, Jr.

Enclosure

JRS:lcb

# USA DATA STANDARDIZATION PROGRAM

## A PROSPECTUS

Interest has been growing in the last few years in professional, industrial and commercial communities in an improved capability to interchange data. This interest is, on the one hand, merely a current manifestation of long-standing need of these communities to improve methods of communication and conducting the affairs of the communities; on the other hand, recent developments in computers and communications and the ability that is now in prospect for organizations to communicate on a computer-to-computer basis accounts for much of the rapid growth of interest that is now evident.

There are professional and industrial and commercial communities that by their nature have a requirement for rapid data communication and have pioneered in the development of data interchange capabilities. The World Meteorological Organization, The Air Transport Associations, and the Financial community provide examples of pioneering developments by professional, industrial and commercial communities of a data interchange capability.

What is now in prospect is an extension of the kind of data interchange capability that has been established on a specialized basis in these communities to all professional, industrial and business communities. Such a broad extension of an interchange capability is seen, not simply as a way of speeding and improving the efficiency of conducting the established affairs of these communities, but as the basis of a major advance in the effectiveness with which the communities can perform their functions.

In more specific terms, what is in prospect is, for example, the ability of Company A to interchange data directly between its own data system and the independent data systems of Companies B, C and D, which are vendors of Company A. Company A wishes to interchange directly between its own data system and the data systems of its vendors data now interchanged by means of conventional transaction documents: Specifications and requests for quotations; quotations; purchase orders; order status inquiries; shipping notices; payments.

The establishment of such a data interchange capability entails a broad program of standardization. The nature and scope of the program can be defined by means of the parallel between interchanged transaction documents and interchanged messages:

(1) The program must cover the establishment of standard identifiers for the subjects to which the entries on

transaction documents refer. These include identifiers of locations, organizations, actions, products, times, money amounts, etc.

(2) The program must cover standard identifiers to serve in place of the legends and captions that identify entries on conventional transaction documents.

(3) The program must provide standard conventions for arranging and inter-relating the contents of messages. These conventions perform the functions performed on conventional transaction documents by rulings and groupings of entries.

(4) The program must provide for standard methods for defining and describing data involved in interchange and for establishing and maintaining in a standard readily available form in data systems the definitions and descriptions of data and the specifications of messages that are established as standard. Such registries of standard data and messages are the counterpart of the forms specifications, code tables and glossaries that are involved in handling conventional transaction documents.

The establishment and subsequent maintenance of a national data interchange capability requires the co-operation of the entire family of professional, industrial and trade associations. There is no subject area to which interchanged data will refer that is not the subject area of specific concern of an established community of interest and association. The establishment and maintenance of standard data for a given subject area is a natural extension of the accepted tasks of associations having to do with improved communications and procedures for conducting affairs.

The first steps to develop a national data interchange capability were taken by the USA Standards Institute (USASI) in 1965, when an Ad Hoc Committee was formed to study the problems involved and to develop and recommend data standards in subject areas of general interest. The Ad Hoc Committee was established under USASI Sectional Committee X3, "Computers and Information Processing". In 1966, the Ad Hoc committee was established as Sub-committee X3.8; the Sub-committee is now known as "Data Elements, Codes and Formats".

In a first phase of the work of Sub-committee X3.8, the task of establishing a national data interchange capability was defined. A second phase is now starting in which associations that are prospective parti-

cipants in the establishment and maintenance of a data interchange capability will be consulted. The object of the consultation will be to ascertain the nature and extent of programs underway and projected that contribute to a data interchange capability, to inventory resources available for accomplishing the interchange task, and to develop methods of operation to give an initial interchange capability and provide for continuing maintenance and strengthening of the capability. The establishment of an initial interchange capability with co-operating associations will constitute a third phase of the work of Sub-committee X3.8.

X3.8/105 Attachment
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