

# Electronic Mail Survey

## Summary of Findings

Butler Cox & Partners Limited



# The Butler Cox Foundation

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The Foundation collects its information through its office in London and also through its associated offices in Europe and the US. It transmits its findings to its members in three main ways:

- Through regular written reports that give detailed findings and substantiating evidence.
- Through management conferences for management services directors and their senior colleagues, where the emphasis is on the policy implications of the subjects studied.
- Through professional and technical seminars where the members' own specialist managers and technicians meet with the Foundation research teams to review their findings in depth.

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## Publications 1977-80

### Reports 1977-80

1/July 1977	Developments in data networks
2/August 1977	Display word processors
3/November 1977	Terminal compatibility
4/December 1977	Trends in office automation technologies
5/February 1978	The convergence of technologies
6/April 1978	Viewdata ( <i>Permanently out of print</i> )
7/May 1978	Public data services
8/June 1978	Project management
9/July 1978	The selection of computerised PABXs
10/November 1978	Public on-line information retrieval services
11/February 1979	Improving systems' productivity
12/June 1979	Trends in database management systems
13/April 1980	Investment in systems
14/September 1979	The competitive equipment market
15/September 1979	Management services and the microprocessor
16/November 1979	Mainframe computers in the 1980s
17/February 1980	Electronic mail
18/April 1980	Distributed processing: management issues
19/June 1980	Office systems strategy
20/August 1980	The interface between people and equipment
21/October 1980	Private communications networks

### Conference Transcripts 1977-80

May 1977 London	Computers, communications and office automation: the emerging pattern of information systems
November 1977 Stratford-upon-Avon	The management policy issues arising from emerging technologies
April 1978 London	Key issues in data processing
October 1978 Bristol	Management priorities for the 1980s
May 1979 Westchester, New York	Office automation: when and how will it happen? Distributed processing: the policy issues for management services
November 1979 Birmingham	The changing role of management services
May 1980 Venice	System development — prospects for the 1980s
December 1980	New applications, new technologies

## **ELECTRONIC MAIL SURVEY**

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## ELECTRONIC MAIL SURVEY

### I. INTRODUCTION

As part of the research conducted for the Butler Cox Foundation on advanced information systems, Butler Cox & Partners recently carried out in Europe a survey on electronic mail.

Although electronic mail has been much discussed recently in relation with incipient office automation efforts it remains an elusive concept. Many people think of it as an improved postal service that will displace public mail services and/or private courier services. Yet early experimentation in the United States shows that electronic mail is centred around computer-based message distribution systems that support a new dimension of person-to-person communication by text. Essentially, electronic mail is at present a form of enhanced telex, with the additional features of local distribution and the storage and retrieval of messages, all of which are handled directly by the user.

Therefore, for the purpose of the survey we adopted as our definition of electronic mail: "Person-to-person communications of visual information using electronic means". The exact purpose of the survey was to find out just how European organisations viewed electronic mail and what, if anything, they were doing about it.

The response to the survey was very high, which indicated that there is a high degree of interest in the subject. The results are summarised in this short report, which has been prepared for the exclusive benefit of those organisations that participated in the survey.

### II. THE SAMPLE OF THE SURVEY

The questionnaire was mailed to over 800 organisations in all the countries in Western Europe. In all, 246 replies were received, which represents a response rate of 30%. Tables 1 to 3 give a breakdown of the respondents by main business activity, country and size respectively.

**TABLE 1**  
**MAIN ACTIVITIES OF RESPONDENT ORGANISATIONS**

Type of Activity	Percentage of respondents
Government	4
Public utility	5
Finance	8
Insurance	6
Publishing	2
Transportation	4
Retail	4
Distribution	5
Manufacturing	43
Other	19
	<u>100%</u>

**TABLE 2**  
**COUNTRIES IN WHICH RESPONDENT ORGANISATIONS ARE BASED**

	Percentage of respondents	Percentage by aggregates
Italy	1	} 2
Luxembourg	1	
United Kingdom	40	40
Germany	11	} 17
Switzerland	6	
France	4	} 10
Belgium	6	
Sweden	6	} 16
Denmark	2	
Norway	6	
Finland	2	
The Netherlands	15	15
	<u>100%</u>	<u>100%</u>

**TABLE 3**  
**SIZES OF RESPONDENT ORGANISATIONS**

Number of employees	Percentage of respondents
Up to 500	13
501 to 1,000	9
1,001 to 10,000	42
10,001 to 50,000	26
more than 50,000	10
	<u>100%</u>

### III. STAGE OF DEVELOPMENT OF ELECTRONIC MAIL

Bearing in mind that electronic mail systems are still comparatively new, a fairly high percentage of respondents (16%) apparently already use an electronic mail system. In addition, 23% said that they were firmly intending to start using an electronic mail system within the next two years, and 17% said that they were considering to start using such a system in the following two years. These figures show that more than half of the respondents either were already using electronic mail or had firm plans to do so. By contrast, about a quarter of the respondents said that they did not yet know whether they would install an electronic mail system.

The respondents' replies showed that the use of an electronic mail system was most advanced in the Federal Republic of Germany (BRD) and was next most advanced in France and Belgium.



Most of the respondent organisations in France, Belgium, Holland and the Scandinavian countries have already installed an electronic mail system or else have decided to do so. By contrast, the respondent organisations in the United Kingdom (UK) and, paradoxically, in the BRD had the greatest doubts about whether they would install an electronic mail system.

The analysis of replies of business activity shows that, in descending order of use, the types of organisation that are making the most advanced use of electronic mail are transportation, finance, retail and distribution. Most of the respondents in government departments, public utilities and manufacturing organisations do not yet have any plans to install an electronic mail system. Table 4 shows the results of the survey regarding this point.

**TABLE 4**  
**STAGE OF DEVELOPMENT OF USE OF ELECTRONIC MAIL ANALYSED BY**  
**BUSINESS ACTIVITIES OF THE RESPONDENT ORGANISATIONS**

	Commonest stage*	Percentage of organisations that have no plans at present
Government	1 or 2	46
Public utility	1	39
Finance	4	25
Insurance	4	21
Publishing	1	40
Transportation	5	20
Retail	4	22
Distribution	3 or 4	9
Manufacturing	4	31
Other	4	19
Whole sample	1	26

- \* Stage 1 - No plans yet
- 2 - At the planning stage
- 3 - Planning to start after two years
- 4 - Planning to start within two years
- 5 - Already using electronic mail

#### IV. CURRENT SYSTEMS AND PLANS

##### A. SYSTEMS AND DEVICES

We asked respondents to state the dates on which they had installed, or expected to install, various communications systems and devices which might be associated with electronic mail. We also asked them to state on what date they first used or expected to use those devices in an electronic mail system. Table 5 summarises some key data for the systems and devices our respondents listed. In general, the degree of penetration tends to fall off sharply after 1981, and this presumably indicates that respondents have no firm plans for 1982 onwards. Exceptions to this (i.e. where the rate does not flatten off rapidly) are indicated by asterisks on table 5. Clearly, these represent the most promising media for electronic mail in the longer term.

## B. DESIGN

A high proportion of respondents, including nearly half of those who are already using electronic mail, said they had not yet decided on a design for their electronic mail systems. This indicates that users are proceeding slowly, and that most experience so far has been either with pilot schemes or with local, limited systems. Of those who have decided on a design (44 respondents in total), nearly three-quarters were using their own design. Publicly-supplied systems that respondents mentioned included teletex and videotex. Where respondents mentioned privately-supplied systems, these were often based on communicating word processors.

**TABLE 5**  
**SUMMARY OF KEY DATA FOR EACH TYPE OF SYSTEM**  
**AND DEVICE USED WITH ELECTRONIC MAIL**

	Percentage degree of penetration		Percentage degree of use		Countries in which they are more likely to be used <sup>+</sup>	Countries in which they are least likely to be used <sup>+</sup>
	1975	1981	1975	1981		
Private voice or data networks	27	51	6	31*	UK	BRD, NL
Electronic PBX	4	30	0	13*	UK	BRD, NL
Telex switching system	14	35	8	32	UK	BRD
Teletex	0	3	0	80	Nordic	—
Analogue fax	16	41	3	18	—	Nordic
Digital fax	3	18	14	36*	F	—
Stand-alone word processors	16	75	3	11	F	—
Communicating word processors	1	35	0	79	F	NL
Computer-based message system	9	32	20	39*	F	BRD, NL
Videotex	0	26	0	20	BRD	Nordic, F
Optical character recognition	6	16	0	12	F	Nordic, BRD

- <sup>+</sup> F = France and Belgium  
 BRD = Federal Republic of Germany *plus* Switzerland  
 NL = The Netherlands  
 Nordic = Sweden, Denmark, Norway and Finland  
 UK = United Kingdom

\* Most promising media for electronic mail in the long term.



## C. MAIN TELECOMMUNICATIONS SYSTEM

Table 6 shows an analysis of the telecommunications systems that respondents said they expect to use for electronic mail.

One trend which is apparent is that those organisations that are intending to introduce systems in the next few years are more likely to use a separate computer for switching messages than existing systems do (85% compared with 69%).

**TABLE 6**  
**TELECOMMUNICATIONS SYSTEMS THAT RESPONDENTS**  
**ARE INTENDING TO INSTALL**

	Percentage of respondents who are using the system solely	Percentage of respondents who are making some use of the system
Private voice network	14	22
Private data network with dedicated computer-based message system	27	40
Public data network with data processing computers	26	35
Public transmission facilities	32	34

## V. OPPORTUNITIES AND CONSTRAINTS

### A. POSITIVE FACTORS

There was a considerable spread in the way respondents rated those factors that encourage the introduction of electronic mail, and there was no real consensus. Improvements in the level of productivity or service were generally rated higher than cost savings. Table 7 summarises respondents' views.

**TABLE 7**  
**POSITIVE FACTORS THAT ENCOURAGE THE**  
**INTRODUCTION OF ELECTRONIC MAIL**

	Percentage of respondents who rated this factor "unimportant"	Commonest response*	Mean response*
<b>SAVINGS</b>			
— In office labour costs	13	3	1.8
— In post and tele- communications costs	21	1	1.5
— In other costs	64	0	0.7
<b>IMPROVEMENTS</b>			
— Increased staff productivity	6	3	2.2
— Faster and more reliable communications	5	3	2.2
— Improved document creation, filing retrieval and distribution	9	3	2.0
— Availability of direct links with external organisations	36	0	1.0
<b>OTHER REASONS</b>	73	0	0.6

\* Ranging from 0 (unimportant) to 3 (very important)

#### B. NEGATIVE FACTORS

Respondents were asked to rank separately both the internal factors and the external factors that inhibit the introduction of electronic mail.



Table 8 summarises the responses on internal factors, which shows a clear bias towards technical problems. This suggests that respondents see electronic mail as just a new system, rather than as something that will radically alter the way organisations operate or the way people do their work. This view appears to conflict with the answers to positive factors. With those factors, a large majority of respondents considered that savings in office labour costs and improvements in productivity were important in justifying electronic mail. If this view is correct, it would be surprising if social and industrial problems (on which the variation in responses was especially high) or user education did **not** turn out to be stumbling blocks.

**TABLE 8**  
**INTERNAL NEGATIVE FACTORS THAT INHIBIT**  
**THE INTRODUCTION OF ELECTRONIC MAIL**

	Percentage of respondents who rated this factor "unimportant"	Commonest response*	Mean response*
Inability to cost- justify the change	22	3	1.7
High development costs	12	3	1.9
High operational costs	18	1	1.3
Users' acceptance	17	2	1.6
Considerations of privacy and security	26	1	1.3
Users' education and training	29	1	1.2
Social and industrial problems	38	0	1.1
Risks of pioneering	30	0	1.4
Other	25	0	1.3

\* Ranging from 0 (unimportant) to 3 (very important)

The response on external constraints is summarised in Table 9. Correlation by organisation of the above factors with the stage of development of the system shows that concern over communications standards and over the high cost of public services tends to fall as the development of the system advances. Conversely, the concern that organisations have over PTT delays in providing services tends to rise. These facts suggest that the first two mentioned factors above prove less of a problem in practice than was expected, and that the effect of the last factor mentioned above exceeds the worst fears of intending users.

**TABLE 9**  
**EXTERNAL NEGATIVE FACTORS THAT INHIBIT THE**  
**INTRODUCTION OF ELECTRONIC MAIL**

	Percentage of respondents who rated this factor "unimportant"	Commonest response*	Mean response*
PTT monopoly and regulations	22	3	1.7
Lack of communications standards	9	3	2.2
Limited selection of public communications services	26	1	1.3
PTT delays in providing services and equipment	26	2	1.5
Uncertainty about future services	24	2	1.5
Limited selection of privately-supplied services and equipment	31	1	1.2
High cost of private communications network	22	3	1.8
High cost of public services	17	1	1.5
Other	15	0	0.9

\* Ranging from 0 (unimportant) to 3 (very important)



In table 10 we summarise, in descending order of importance throughout, respondents' concerns over electronic mail.

**TABLE 10**

**RESPONDENTS' CONCERNS ABOUT ELECTRONIC MAIL**

**HIGHLY IMPORTANT CONCERNS**

- Lack of communications standards
- High development costs
- High cost of private communications networks
- Inability to cost-justify the change
- PTT monopoly and regulations

**VERY IMPORTANT CONCERNS**

- Users' acceptance
- PTT delays in providing services and equipment ordered
- Uncertainty about future public services

**FAIRLY IMPORTANT CONCERNS**

- High cost of public services
- Considerations of privacy and security
- Limited selection of public communications services
- Users' education and training
- Risks of pioneering

**UNIMPORTANT CONCERNS**

- Social and industrial problems

**VI. USE OF ELECTRONIC MAIL SYSTEMS**

Table 11 shows an analysis of the types of messages that electronic mail systems are expected to carry.

**TABLE 11**

**TYPES OF MESSAGE THAT ELECTRONIC MAIL SYSTEMS ARE EXPECTED TO CARRY**

Type of message	Commonest response regarding future likelihood of use	Percentage likelihood of use
Unscheduled internal	Very likely	76
Scheduled internal	Very likely	78
Unscheduled external	Unlikely	45
Scheduled external	Unlikely	44

Table 12 shows an analysis of the types of staff that are expected to use electronic mail systems, and the use staff are expected to make of those systems. Respondents' comments also revealed a widely-held view that electronic mail systems were not only desirable but inevitable.

TABLE 12

## EXPECTED USERS OF ELECTRONIC MAIL SYSTEMS

Type of staff	Commonest response regarding future likelihood of use	Countries to which the commonest response most applies
Top level managers	Some use	UK, F
Other managers	Most use	
Secretaries	Much use	NL, F
Clerks	Some use	F
Other administrative staff	Much use	
Professionals and technicians	Most use	F
Others	No use	

## VII. CONCLUSION

This survey demonstrated the high degree of interest that organisations throughout Europe have in electronic mail. Clearly, electronic mail is still at a formative stage, and the vast majority of organisations are at either the planning or the experimental stage. The difficulty suppliers experience in getting to understand the market is evidenced by the wide range of approaches that are being considered and tried.

We believe that this survey casts some light on what the market requirements really are and what the overall level of activity really is.

We should like to thank all those who participated in the survey and all those who contributed to our research.



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