Behavioural Team

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TELIDON FIELD TRIAL EVALUATION

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Executive Summary

This report summarizes all that Behavioural Team could learn about user happiness and industry effectiveness during the Telidon field trials. Our purpose was to\support\the development of this technology and thus the report is configured as a\positive\contribution to the success of Telidon. The resulting 380 page document was based on data from:

      ** a review of data collected by the field trial operators,
      ** interviews with members of the Telidon industry
      and information providers,
      ** a review of past lab and human-factors information.
      ** a telephone survey of 96 users in Canada and the U.S.,
      ** and behavioural observations conducted at public terminals.

Documentation for the generalizations below may be found in the body of the report. In any instance where there is no specific reference either the privacy of our respondents would be compromised or it is the opinion of the authors.

General Reactions

General reaction of field trial users was neither strongly negative nor strongly positive. Telidon, as represented in the field trials, should not compete head-to-head with existing alternate media (i.e. newspapers). 61% of telephone respondents said using Telidon to access information is less worthwhile than using the newspaper; 12% said it was more worthwhile. Other reports offer similar findings.

Some Positive Points

According to users, some favourable aspects of Telidon are:

1. the novelty of the technology,

2. the initial entertainment value of the graphics displays,

3. the games, and

4. the fact that use was interactive.

Main Dissatisfactions

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65% (62) of telephone respondents said "yes" when asked if they had experienced frustration or aggravation using Telidon.

The main dissatisfactions are with database information. These are:

1. there is no range of information,

2. there is no depth of information,

3. information is not timely, and

4. information is neither complete nor detailed.

Many of these issues are merely by-products of the newness of Telidon and of the critical-mass paradox. Because the field trials were an experiment, IP's did not develop many pages and many potential IP's did not even participate. Our best information indicates that potential IP's\still\are reserved about committing resources to existing Telidon services.

Another dissatisfaction for users was speed of the system, specifically log-on delays. A somewhat lesser annoyance is the time required for repetitive and/or detailed graphics displays. These problems are more acute when the user's application brackets the amount of time available for use as in a classroom.

The problems reported for database organization were that it is hard to retrace steps or get to other information branches. Users also found it tedious to go through so many levels for such (often) limited information. Again, this is not a technical problem but one of start-up pains. As the number of terminals proliferates, IP's will increase as well.

Technical Reliability

Technical difficulties were not a major problem in users' minds although 54% of those in our telephone survey said "yes" when asked if their [Telidon] equipment had ever broken down. There was some variation among the trials: the range was from 20% to 65% with equipment problems.

Generally peak residential use occurs during late afternoon and early evening. Some 60% of telephone survey respondents' reported using Telidon in the afternoon or evening, while 5% reported morning use. This is very similar to results reported by other studies. Late afternoon use tends to be by children; early evening use is by adults. Some trials reported peaks during the morning hours, although these were smaller than the evening peaks.

Session length varies substantially, depending on terminal location, setting, and information available. Our behavioural observations revealed an average session

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length of 4 minutes and 21 seconds for public teletext. According to our telephone survey, 63% typically viewed Telidon for 20 or more minutes while only 8% used it for fewer than ten minutes per session, on average. Viewing time seems to be a function of user intent, as well as timely, comprehensive information.

Residential Telidon use is often a social situation. But the equipment must be designed to support group settings.

Women and older people are much less likely to use public Telidon (based on our first-hand observations of public terminals); prime users in public locations tend to be younger teenaged boys.

The highest rate of approach in public situations occurred when the previous user had left an index page on the screen.

Page Display

The time required to\transmit\the page seems to be too long for many users. (42% in the telephone survey said "often", 35% "sometimes" when asked how often they felt page display takes too long to\begin\being drawn on the screen.)

\Display\time also tends to be perceived as too long. (79% (76) of telephone respondents said "yes" when asked if they ever thought that pages take too long to finish being drawn.) Graphics page display tends to be the culprit. (86% of telephone respondents mentioned "graphics" as type of page they recalled to be slow.)

Other findings are: that the use of paragraphs can lead to 15% increase in reading speed; and optimum spacing affects reading speed, but not accuracy. Also, smaller type size increases reading speed and larger type size reduces search time. Finally, headlines, colours, and "bullets" help skimming, but not exhaustive reading.

Page display time is a major consideration, and establishing the best role for graphics requires urgent attention.

IP's are asking for help in page design. Successful pages are critical to their\continued\support of this medium.

Perceptions of Physical Telidon
The major user perceptions of physical Telidon are:

1. Telidon is not portable. This reduces its usefulness, both perceived and actual.

2. Screen sizes used in field trials are about right (any change should increase the sizes).

3. Labels on keypads/boards are confusing when they appear\between\the rows of

B T E A M

keys

4. Cords and cables are thought to be unattractive and inconvenient.

5. Ease of equipment use is related to previous experience with other similar devices. (This can hinder\or\enhance learning, depending on the similarity of the equipment.)

6. User complaints about equipment design relate to size of units and/or number of pieces.

7. Aesthetics were not important to most users.

The Telidon Industry

Overall, the Telidon industry developed hardware, created pages, and operated field trials with not unreasonable competence. The relations among the Network Providers, Database Operators, Page Creators and their clients, the Information Providers are examined in some depth in the report. There was a general deficiency in quality of management and in the collection of management information. Many of the study recommendations relate to organizational issues within the industry.

Major Conclusions / Recommendations

1. It is not clear who is "in charge" of Telidon. That is, who is the Publisher?

2. For a mass retail-like activity, great naîveté is shown in human-factors, cognitive psychology, and market research. Numerous examples of improvements are given in the text.

3. Due to the range of skills of users and due to the number of new users (everybody!) greater intelligence is needed in the terminals. This is also important because of the "serial character" of Telidon.

4. Present user interaction protocols and most existing hardware are not recommended for continued use in\public\terminals without substantial and immediate improvement. It is counter-productive to offer to the unselected public services which insufficient numbers of them can successfully access or use agreeably. Home users\can\tolerate existing hardware on an experimental basis.

5. Of all the barriers to the effective proliferation of Telidon, none is so oppressive as the page creation bottleneck. The broadly held antipathy to text and to paper-borne information has hindered the industry. The emphasis on graphic prettiness and the weakness in text-handling software have led to several dire consequences. The problems of page creation are considered in a long chapter in the report. This chapter includes a task-analysis of the technician's job. Behavioural Team condemn one of the page creation terminals.

B T E A M

Some further observations...

Telidon industry personnel should take advantage of the potential for timely information, and emphasize information which is complementary to that in more traditional media (at least initially, until Telidon use becomes more "entrenched" in the public).

Designers should pay close attention to the portability aspects of equipment. (These will likely increase the usefulness of residential, and perhaps business Telidon.)

Designers should also build upon user liking of Telidon's interactive aspects.

A pay-for-service situation will increase the numbers of situations where time is money. Therefore, any factors (technical reliability, search strategy possibilities, etc.) which increase delays will be of greater importance than is evident from this study. \Also greater\will be the range and degree of\dissatisfaction\voiced by paying users generally.

Industry efforts are needed to stress standardization in a broad context, including:

1. compatibility of equipment designed and built by various manufacturers; and

2. consistent use of labels and symbols on equipment, in operating instructions, and on screen displays.

There is a need for coordination of efforts among all the industry participants. (Often there are conflicting goals such as the "universal database" of database operators, and the need for more local database information to encourage community use.)

Industry roles need to be defined. Much of the "fuzziness" in which Telidon currently lives needs to be sharpened for effective growth.

The labels on keypads/boards should be directly on the keys they refer to.

Public locations should have terminals at approximately eye level, to encourage passers-by to use them.

Screen instructions should be stressed (especially in public settings, few users would read through hard-copy material before starting to use the system), using full-length prompts wherever possible.

We hope you will want to read - or at least, to examine - the whole report. It is filled with hundreds of specific observations and innumerable suggestions for improving videotex services.

B T E A M

CONTENTS (page numbers refer to the original print of this report)

Cover, Exec Sum, TOC, page 6

B T E A M

learning different functions of the systems?

B T E A M

Cover, Exec Sum, TOC, page 8

B T E A M

Cover, Exec Sum, TOC, page 9   B T E A M