ABSTRACT
        This study measured the impact of electronic
presentations on the business presenter. An electronic presentation
was defined as a presentation which made use of a computer,
presentation graphics software, and a projection device. A
questionnaire was sent to 560 subjects (40% returned) randomly
selected from a training and development consortium located in State
College, Pennsylvania that provides guidance to businesses in the
Central Pennsylvania region. The results from the study fall into two
major categories: those derived from all of the respondents and those
derived from the sub group of respondents that were engaged in making
electronic presentations. An examination of all the respondents
yielded that 27% reported giving at least one electronic
presentation; preferred presentation devices in rank order included
overhead projector, flip chart, electronic presentation, and slide
projector. Respondents that had reported experience in giving
electronic presentations (27%) were then classified into three
categories: presenter-oriented, hardware/software-oriented, or
audience-oriented responses. Five implications were derived from this
study: (1) respondents that used electronic presentations felt they
were very effective for delivering a message to an audience; (2)
overhead transparencies continue to be judged the most effective
medium, but electronic presentations are growing in favor; (3) video
projection is not heavily used; (4) the biggest weakness of
electronic presentations is that you cannot depend on the various
electrical components; and (5) Microsoft's PowerPoint software
dominates the electronic presentation medium. Eight figures provide
information on study results. (AEF)

Electronic Presentations In The Corporation: How Are They Being Used

Robert E. Griffin
Rune Pettersson
Ronald Johnson

Introduction

Very few facts are known about how electronic presentations are being used in today's business environment. The medium is just too new. The medium is the newest on the presentation scene and electronic presentations have become the fastest growing medium in the presentation industry. The purpose of this study was to measure the impact of the medium on the business presenter and also to serve as a base line study for future analysis of the medium.

Business people are making use of electronic presentations. Of the business people that were participants in this study, 73% reported relying on visuals when they make presentations. They also report giving between 1 to 5 presentations per month. Another remarkable statistic about this test group, one that fuels the growth of electronic presentations, is that 50% of the respondents report either owning or having access to a laptop computer. Business people have the need and the means to make electronic presentations.

Definition Of An Electronic Presentation Used In This Study

For the purpose of this study an electronic presentation was defined as a presentation which made use of:
• a computer (often a laptop design),
• presentation graphics software (i.e. PowerPoint, Harvard Graphics or Freelance)
• a projection device (one of the following devices - overhead projector and a liquid crystal display panel, video projector with computer connections, large screen computer monitor, laptop or desktop computer only).

Of course there are other definitions of an electronic presentation, however, this view gave us a broad interpretation of the medium.

A Brief History Of Electronic Presentations

Growth of the electronic presentation for business presentations has been extraordinary. Not since the growth of the overhead projector in the 1960's has a family of audio visual devices captured the attention of people who make presentations.

But, there are differences in the growth patterns of the two mediums. When the overhead projector exploded on the scene its impact was felt most strongly by educational institutions, primary and secondary schools and colleges. And while educational institutions have shared in the growth of electronic presentations, the high costs involved are often too much of a burden for educational institutions. This medium has had it's biggest impact to date in business: business

people are making electronic presentations.

How The Study Was Conducted

A questionnaire was sent to 506 subjects. A complete listing of the questions and results of the study are shown in Figure 8 at the end of this paper. The subjects were randomly selected from the mailing list of the Private Industry Council of Central Pennsylvania, a training and development consortium located in State College, Pennsylvania. This consortium provides guidance to businesses in the Central Pennsylvania region. All of the subjects contacted were somehow associated with the business community.

A total of 201 questionnaires were returned by the due date stated on the questionnaire. This was a 40% return rate.

A generalized profile of the respondents indicates that they came from diverse types of companies with diverse company size. Many industries were represented. The subjects were 59% male and 40% female with 1% not determined. The average age of the respondents was from 36 to 45 years old. This mixture of subjects provided a strong pool for the study.

Results Of The Study

The results that were derived from the study fall roughly into two major categories: those results derived from all of the respondents and those results derived from the sub category of respondents that were engaged in making electronic presentations.

Results From All Respondents

Three major results were discovered when we looked at all of the respondents in the study. First, 27% of the respondents reported giving at least one electronic presentation. Interestingly, several of the respondents reported that they had given electronic presentations in previous jobs with other companies, but could not give electronic presentations now because their employers did not have electronic presentation equipment.

Another interesting result derived from all of the respondents in the study was their ranking of their preference for various audio visual devices. As a group their preferred devices, in rank order, were as follows:
1. overhead projector
2. flip chart
3. electronic presentation
4. slide projector

As a group they did not consider the electronic presentation to be very high on the presentation list. This ranking is important when it is compared to the group of respondents who use electronic presentations.
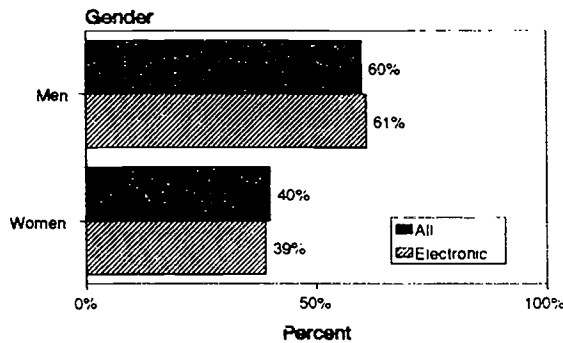
Results From Respondents That Used Electronic Presentations

To determine the impact that electronic presentations have had on business presentations, we separated out those respondents that reported experience in giving electronic presentations. Subjects that fell into this group accounted for 27% (54 subjects) of the total subject pool. We have classified the responses from this group into three categories: presenter-oriented, hardware /software-oriented, or audience-oriented responses.

Presenter-Oriented Responses

In this category we gathered responses from presenters that told us something about the people who give electronic presentations. In this paper we will display our results using bar graphs. Whenever possible this data will show information for all respondents (under the heading All) and for those that used the electronic medium (under the heading Electronic). For example, we found that an almost equal number of men and women give electronic presentations. Figure 1 shows the percent of males and females who use the medium.

Figure 1
Gender of People Surveyed

There seems to be no gender bias in who gives electronic presentations. The minor difference between the genders is not significant.

While gender bias does not exist, use does appear to be determined somewhat by age. Use by age can be seen in Figure 2.

Figure 2
Age Of People Surveyed

What is apparent when you look at Figure 2 is that the 36-45 age group accounts for the greatest number of the electronic presentations. But, what is interesting when you analyze Figure 2, is that a large percentage of people in the 46-55 group and the older than 56 group give electronic presentations. There are several reasons that may explain this phenomenon. First, older business people often are in a better position within a business enterprise to give presentations. Because of age and experience, men and women over the age of 46 usually give the corporate world's presentations. A second reason for the age phenomenon to occur is that older people are more likely to have access to electronic presentation equipment within the organization. The older, experienced people seem to be able to locate and make arrangements to use the corporations electronic presentation equipment. A third reason that can be offered is that older presenters are possibly more able to take presentation risks than younger people in the organization. As will be talked about later in this paper, giving an electronic presentation continues to be a riskier situation than the more conventional presentation. The possibility of presentation failure looms large.

It is interesting to compare the electronic presenters to all respondents. When the electronic presentation group was asked to rank their preference for audio visual devices, their list was as follows:

1. overhead projector
2. electronic presentation
3. flip chart
4 slide projector

The difference between the two groups is in the shift between the electronic presentation and flip chart. Electronic presenters rank electronic presentations ahead of flip charts while all respondents reverse the order. What is startling about this ranking is that even electronic presentation presenters rank the overhead projector first. The reason for this may be based on the fear factor with electronic presentations. A salesman for video projectors reported to us during our early work on this research that he still sees many potential customers that will not consider using electronic presentations because too much can go wrong with them. The salesman referred to the problem as the "fear factor". Obviously electronic presentation manufacturers and potential customers will have to work together to reduce this presentation fear.

411

Respondents were also given an opportunity to give open ended comments about electronic presentations. Some positive reasons given by presenters for giving electronic presentations were:
- electronic presentations are sent to us from headquarters and we use them
- animation can be used on the medium

They also offered some reasons for caution about the medium.
- you can't always depend on electronics
- can t count on it in hotels...you've got to carry your own gear

The researchers also found some misguided reason for using electronic presentations. We refer to these reasons as misguided because they can not be supported in the research literature. These reasons are:
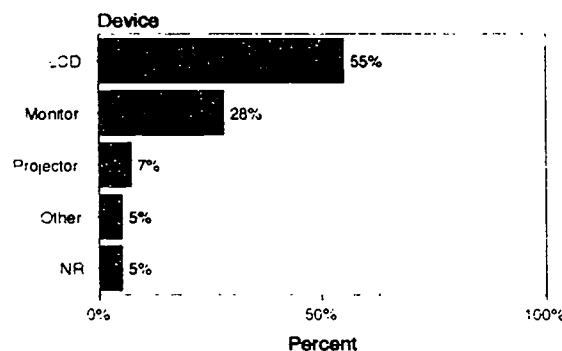- electronic presentations give (you choose the word...impressive, professional. effective, efficient, vivid. clearer, sexy) presentations
- electronic presentations make it easy to present large amounts of numerical data
- audiences want electronic presentations
- you can personalize electronic presentations
- it's easy to make word lists

These reasons will be discussed further in the implications section of this paper.

Hardware-Oriented Responses

Responses about choices of electronic presentation hardware were also revealing. Figure 3 indicates the type of equipment that is most often used to display the output of the electronic presentation.
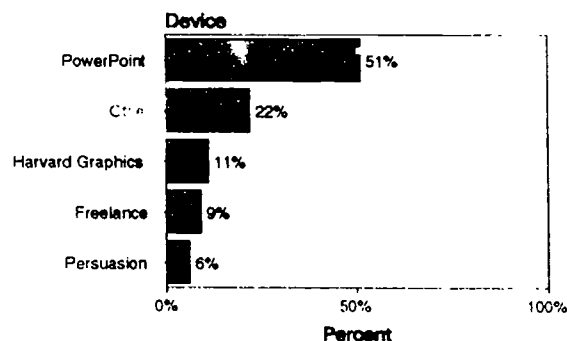
Figure 3
What Device Do You Use To Display Your Electronic Presentation

As the data indicates, a liquid crystal display (LCD) seated on top of an overhead projector is the most common display device. We wondered how many of the LCD panels were used on overhead projectors with inadequate lumen output. Low light output overhead projectors are a major problem in electronic presentation display. Monitors were the second most popular display device.

Another tool of the electronic presentation is software. The questionnaire listed the most popular brands of presentation software used in business, but also allowed for an open ended response. The results are shown in Figure 4.

Figure 4
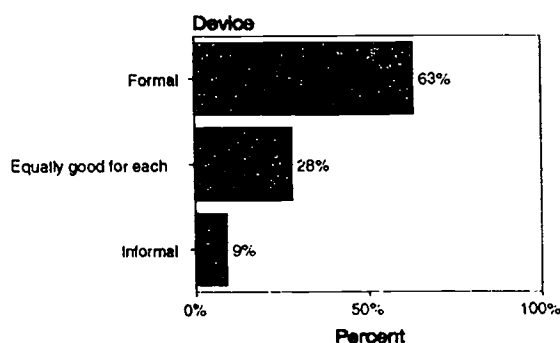### What Software Do you Use To Make Electronic Presentations?

Obviously the Microsoft revolution continues to sweep the electronic presentation marketplace with the overwhelming response for PowerPoint software. PowerPoint software is the most heavily used software for electronic presentations. It is assumed the popularity of this presentation software will continue to grow through the next several years.

Audience-Oriented Responses

Responses in this category told us about the audience perspective of the electronic presentation. In this area the authors looked at issues relating to type of message, length of message and audience size. For example, Figure 5 shows that most presentations are given in a formal, planned presentation rather than an informal situation.
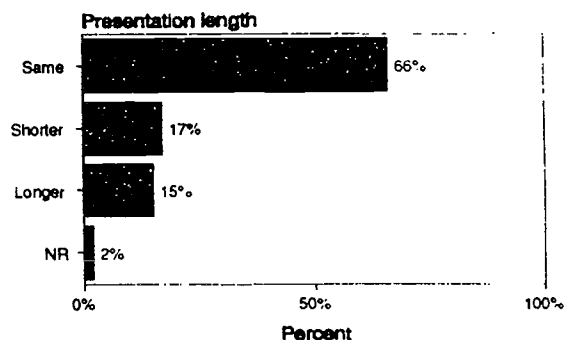
Figure 5
In What Type Of Presentation Setting Do You Use Electronic Presentations?

Device

Formal — 63%
Equally good for each — 28%
Informal — 9%

0%   50%   100%
Percent

In another area of audience-related response, the authors wondered if electronic presentations lasted longer than presentations given in other mediums. A general perception about the electronic presentation is that they last longer than presentations given with other mediums because there are so many "extras" that come with the electronic medium. Research does not support this fact. Figure 6 indicates that electronic presentations do not seem to be longer or shorter than presentations
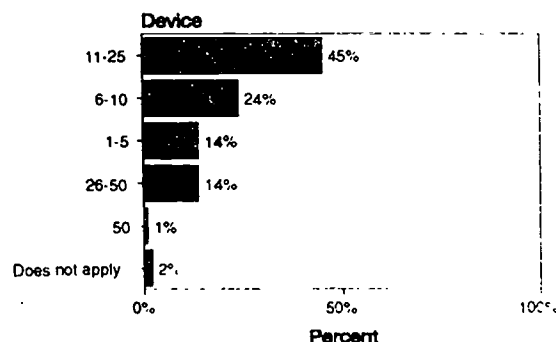
done in other mediums.

Figure 6
What Is The Length Of Your Electronic Presentation Compared To Other Audio Visual Mediums?

Presentation length

Same — 66%
Shorter — 17%
Longer — 15%
NR — 2%

0%   50%   100%
Percent

Another area that was investigated was the size of the audience for a typical electronic presentation. Audience size provided a few surprises. Figure 7 shows the size of the typical electronic presentation audience.

Figure 7
To What Size Audience Do You Normally Present Electronic Presentations?

Device

11-25 — 45%
6-10 — 24%
1-5 — 14%
26-50 — 14%
50 — 1%
Does not apply — 2%

0%   50%   100%
Percent

It was surprising to the authors that electronic presentations are given to smaller audiences rather than larger audiences. This is a statistic that will most likely change as display devices move from LCD displays and monitors to video projectors.

Implications

There are six implications that can be derived from this study.

1. Respondents that used electronic presentations felt that they were very effective for delivering a message to an audience. They justify the effectiveness of the medium by citing reasons that are not supported in the research literature.

Judgements about the electronic medium appear to be based on feelings rather than empirical fact There are a wide variety of reasons mentioned for using electronic presentations that are simply erroneous. One respondent said, "using electronic presentations gives me a sexy presentation." As desirable as it may be to give a sexy presentation the medium is not designed to provide this quality. It can be hypothesized people will continue to adopt new media for their own reasons.

2. Overhead transparencies continue to be judged the most effective medium for delivering a message, but electronic presentations are growing in favor.

This finding was surprising to the authors. It appears that while the electronic presentation offers many advantages over older mediums, what a presenter needs more than anything else is dependability. When the presenter turns on the switch he expects something to happen. The electronic presentation has not yet reached that level of dependability. When it does, the overhead projector may be relegated to second place.

3. Video projection is not yet heavily used. Only 7% of the respondents reported using the medium.

How to display electronic presentations has long been the question with the medium. While the liquid crystal display (LCD) is the leading method of display, the major deficiency of the hardware is that the display can not always be paired with a high light output overhead projector. High output overhead projectors used with an LCD must have at least 4000 to 6000 lumens of light output. Many electronic presentations do not suffer from deficient LCD's, but rather from low light output overhead projectors.

Video projectors appear to be the superior device for making electronic presentations. These projectors combine the display device and the properly matched light output in one convenient package. Generally the video projector is a medium weight device that can be purchased for about the same price as the LCD and overhead projector combination.

4. The biggest single weakness cited by the respondents for electronic presentations is that you cannot depend on the various electronic components. Reliability of the equipment must be increased and the fear factor of presenters must be decreased.

This is a major finding of this study and should be heeded by equipment manufacturers and audio visual professionals. If this medium is to reach its true potential, the equipment must be made more reliable, easier to interconnect and simpler to use. The success of this medium will be impeded if users must rely on an army of computer gurus in order to make their presentations work successfully.

5. Microsoft's PowerPoint presentation graphic software dominates the electronic presentation medium. What Microsoft adds to the software will become the standard for the electronic presentation medium.

Microsoft's domination of this segment of the software market can be a problem or a blessing to the electronic presentation marketplace. If Microsoft continues to improve PowerPoint new converts will move to the medium because of features offered by the software. However, if product development of the software stalls, new dimensions of the medium may not be found. New players in the presentation graphic marketplace are not likely to enter rapidly because Microsoft holds a large share of the suite marketplace for software. Few companies have the ability to challenge Microsoft's power.

Conclusion

The electronic presentation is a force to be reckoned with in the world of presentations. The electronic presentation revolution has only begun, but the fate of the medium rests on an unstructured alliance between hardware manufacturers, software developers and end users. The right interaction between these forces is needed to insure that the deployment of the medium is successful.

Figure 8
Complete Questionnaire Results

QUESTION	RESPONSE	ALL (N=201)	ELECTRONIC ONLY (N=54)
1. On average, how many presentations (electronic & non-electronic) do you normally give a month?	None 1-5 6-15 16-30 31+ NR	5 111 31 2 4 1	23 36 12 1 2 0
2. Do you usually use visuals in your presentation?	Yes No NR	147 44 10	9 5 0
3. Have you ever given an electronic presentation?	Yes No NR	54 139 8	- - -
4. Of the presentations you give each month, how many are given electronically?	None 1 2-5 6-10 10+ NR	139 0 0 0 0 8	0 19 16 4 4 1
5. When you use an electronic presentation what are the reasons that you choose to use them?	open response		
6. To what size audience do you normally present electronic presentations?	1-5 people 6-10 11-25 26-50 50+ Does not apply	- - - - - -	7 13 24 7 1 2
7. If you at times give electronic presentations & at other times use another medium, are the electronic presentations...	longer shorter about the same NR	- - - -	8 9 36 1
8. For what kind of presentation would you use an electronic presentation?	formal informal equally good	- - -	34 5 15
9. When you use electronic presentations, what software do you normally use to create & present you presentation?	PowerPoint Harvard Graphics Freelance Persuasion Other	- - - - -	28 6 5 3 12

QUESTION	RESPONSE	ALL (N=201)	ELECTRONIC ONLY (N=54)
10. When you use electronic presentations. what type of display do you most commonly use?	video monitor liquid crystal display video projector other NR	- - - - -	15 29 4 3 3
11. Do you own or have access to a laptop computer?	yes no NR	101 95 5	42 12 0
12. Rank the mediums in terms of their usefulness to you in business presentations.	see paper		
13. What is the size of the company you work for?	<50 employees 50-200 201-750 >751 NR	73 46 34 45 3	13 16 8 16 1
14. What business sector do you work in?	Multiple responses		
15. What is your gender?	male female NR	120 80 1	33 21 0
16. What is your age?	<25 25-35 36-45 46-55 >56 NR	3 38 78 59 22 1	1 10 26 15 2 0

10