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ABSTRACT

A unique system for writing and producing multimedia technical presentations is said to make it relatively easy for any communications professional to get involved with multimedia. Projection equipment and screen numbers are to be chosen strictly on the basis of content; dissolve effects with 35mm slides are described as the key. Central themes are to be reinforced through animated slides. 16mm clips intercut with slides and three- to six-minute "jury duty" films are to be used. Details of a hypothetical technical project are presented to show how the approach works. (SK)

TECHNICAL PRESENTATIONS IN MULTIMEDIA: A MODULAR ~~APPROACH~~

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Abstract

A unique system for writing and producing multimedia technical presentations has been developed. The approach makes it relatively easy for any communications professional to get involved with multimedia.

Projection equipment and screen number are chosen strictly on the basis of content. (Concessions to pragmatism and availability are made later.) Dissolve effects with 35mm slides -- build-ups, "gray type" effects, varied timing intervals and color shifts -- are the key to this modular system. Central themes are reinforced through judicious use of animated slides. Two types of cinematic effect are used: (1) 16mm clips (intercut with slides) and (2) three-to-six minute "jury duty" films (which enable smooth transitional changes). Demonstration pieces alter the pace and outline key sections.

Details of a hypothetical technical product are presented in multimedia to show how the approach works. This modular system provides considerable flexibility to package information for different audiences and room conditions.

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Introduction

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The essentials of Associated Press dispatches are speed, simplicity and artless, necessary organization. ... These conditions require a story to begin with ~~the~~ the names of the teams, an indication of what sport is in question, a mention of the final score and, if possible, the winning play. One devotes succeeding paragraphs to significant moments, in the order of their importance, and, when space is so tight that real description is impossible, pertinent statistics.

... At the AP you learned formula and developed speed. The first is antithetic to creative writing and the second is largely irrelevant, but both are critical to the confidence of every newspaperman. There is never a working day when the guillotine of deadline does not hang above one's neck. It is a comfort beyond prayer to realize that when sweeter muses are struck dumb, one can always write a variation of AP Formula One, "A fourth quarter scoring pass from Chris Kartalis to White Drown," and neither win a prize nor utterly fail.

Roger Kahn  
The Boys of Summer<sup>1</sup>

"Speed, simplicity and artless, necessary organization" are an unlikely list of essentials for multimedia presentations. Certainly, the word "simplicity" (and -- hopefully -- "artless") would have to be removed. Phrases such as "attention to detail," "media familiarity," "audience involvement," "pace and timing" and "changing visual experience" would have to be added. Multimedia presentations are complicated. When the intricate details inherent to a technical presentation are added, the complexity level often becomes staggering.

And frightening.

I have found that this fear leads many technical communicators to ~~avoid~~ avoid multimedia -- even when it represents the best means of conveying a technical message.

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And such fears are not without justification. Presentations in this format entail extensive risk in expense and personal commitment. Often, things ~~do~~ do go wrong. Because of the complexities involved, it is difficult to compensate for human error or equipment failure. Months of work can turn into a shambles when these things occur.

A "formula" approach -- similar to the one Kahn describes ~~is~~ is useful in minimizing ~~the~~ the risks, catastrophes and fears.

I first became involved with multimedia several years ago when I was asked to prepare a presentation ~~for~~ for three speakers. The presentation was to be given three times to audiences totalling more than 500 persons; the topic was a description of a complex technical project. The words which plunged me into the world of multimedia were, "We really want this presentation to be something special." This led me to draft a script which made considerable use of multimedia effects. At the time, I didn't have the foggiest notion of how most of these effects were implemented.

On that occasion, I was lucky. The subject truly lent itself to multimedia -- and all of the elements of the presentation fell into place quite nicely. With lots of experimentation and the volunteer assistance of many talented colleagues, the presentation turned out to be a big success. I've been involved with multimedia ever since.

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Several subsequent presentation have been more difficult. Some topics have not been as smoothly handled in this format; equipment has blown up and broken down; speakers have skipped sections of their script, throwing everything off track. In defense, perhaps, I've developed a formula approach to multimedia similar to the one I used as a newspaperman writing in AP style. In a pinch, I have some confidence that I can rely on certain elements or modules of the formula to pull a presentation off -- "... and neither win a prize nor utterly fail."

With some understanding of these modules, I think most technical communicators can embark on multimedia projects with lessened anxiety. The project still will involve enormous amounts of hard work, fanatical attention to detail, lots of fretting over a complex of electrical, mechanical, chemical and physiological systems. I think, however, that the chances for success are maximized.

Also, I am confident that the chances for enhancing the flow of technical information are maximized. Done right, a multimedia presentation stands out in a crowd. We live in a world where, as Marshall McLuhan says, "... the need to use the senses is as insistent as breathing."<sup>2</sup> With their increased sensory demands on an audience and their inherent ability to impart more information in less time, multimedia presentations represent a natural format for technical communications.

Before I provide a brief summary of some of the major modules in the formula, it is necessary that I introduce you to NART.

What is NART?

Quite simply, NART is a recently-announced, second-generation tinae in which all T-7 electronic drives are d.c. driven to provide exceptionally high torque for titanium rotors. It features an organic air flow technique to remove all particulate matter of 0.5 microns or larger. A LC46467Y, single-chip digital modem provides modulation, demodulation and supervisory control functions. It weighs only 13 lbs. (5.9 Kg) and has a rechargeable battery pack for up to 8 hours off-line operation.

All in all, NART represents a major improvement over AFD, the first-generation tinae.

NART -- incidentally -- is an acronym for "Not A Real Thing" and AFD stands for "A Fictional Device." Tinae? "This is not anything either." The sole function of these hypothetical products with gobbledygook features for a fictional technology is to help me describe the major elements in my approach to multimedia presentations without getting hung-up in any real technical disputes. It's strictly a device for providing examples which illustrate the overall formula approach.

Essentially, this approach assumes that any technical multimedia presentation will contain certain modules and planning each of these modules on a step-by-step basis. The modules are: initial decision, dissolve effects, animated slides, cinematic effects and a live demonstration.

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Initial Decisions

In most cases, of course, objectives and some basic criteria ~~are~~  
set by the client. Let us assume that our presentation on NART has  
the simple objective of communicating the overwhelming advantages of  
this new product over ARD, the ~~one~~ one presently being used.  
And, yes, the client adds, "We really want this presentation to be  
something special."

Given the characteristics of NART and the client's enthusiasm,  
automatically, we have a good candidate for multimedia. First, however,  
a vital question needs answering: How big is the audience? With the  
expense of multimedia presentations being what it is, a communicator  
has to analyze the total cost in terms of value to the client. The  
communicator should know the cost per showing per person in the  
audience. As a general rule, ~~multiple-screens~~ multiple-screens and multimedia  
represent too much overkill (both financially and emotionally) for  
audiences of 100 or less.

There may be other valid reasons for not using multimedia. Rather  
than reviewing these, however, let me list some that I feel are not  
valid:

- don't know how to do it...
- don't have the equipment...
- don't have the budget...
- don't have enough time.

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These considerations may very well become valid as the presentation evolves -- but not at the outset. Start by scripting the presentation that you want to see. In every case, compromises and trade-offs to practicality will have to be made as "the guillotine of deadline" comes closer. By aiming high, however, the chances for an outstanding presentation -- "something special" -- are increased.

Ordinarily, the first major practical decision for a multimedia presentation has to do with choosing the number of screens to be used. Frequently, it seems to me that communicators simply ~~pick~~ pick a number and go with it. ("Hey, let's use four screens this time! ... as if this somehow will guarantee improvement over the last presentation when only three screens were used.)

There is a better way. We should let the material dictate the method of presentation. For example, if our NART presentation is to be a straightforward, before-and-after, comparison story (i.e., why NART is better than ARD), then we only need two screens to tell it. (Figure 1) Suppose, however, that we want to draw some conclusions on the implications for third-generation tinae technology. Then, three screens probably are better. (Figure 2) Most initial decisions of this sort should flow logically from the message itself. This eliminates any potential problems when the medium turns into the message and the message.<sup>3</sup>

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Dissolve Effects

I begin planning multimedia presentations by assuming that dissolve effects with 35mm slides will be the primary vehicle for carrying the message.

In an article (on a similar subject) for the October 1974 issue of Technical Photography, I wrote "... one area where -- for me -- compromise is not possible, is with dissolve effects. In addition to being crucial to the timing and pace of the presentations, I feel that -- by making technical points on a step-by-step, build-up basis -- they add significantly to the amount of information imparted."<sup>4</sup> I haven't changed my mind on this -- nor am I likely to.

Here is a review of some of the basic things which can be done with ~~the~~ dissolves:

- The most obvious -- and most used -- is the one cited above, the step-by-step build-up. (Figure 3) Coupling two 35mm slide projectors with a special unit for dissolves greatly increases the effectiveness of such build-ups. The audience is led through the presentation on a point-by-point basis -- without the distracting blinks that occur when only one projector is used. Because the slides are made with overlays, the increased production and processing costs are minimal.

- What I call "gray type" effects are even more effective. Suppose that at the conclusion of the build-up shown in Figure 3, we want to put some additional emphasis on NART's "organic air flow" feature. Obviously, the speaker simply could say, "Let's go back and discuss the organic air flow feature in greater depth." Awkward, at best. If another slide is created (again, with overlays) in which all type -- except the line for "organic air flow" -- is shaded light gray, that feature will appear to jump right toward the viewers. (Figure 4) It's a good way to keep the audience with us.
- Unquestionably, the biggest single advantage to dissolve effects is the varied timing intervals that can be used. They provide the presenter with tremendous flexibility in ~~the~~ setting the pace for the presentation, in stressing key points and adding a sense of drama.
- More emphasis can be added with color shifts on the dissolved slides. For example, in ~~Figure 4~~ Figure 4, we also might want to shift the color of the dominant line (say, from white to yellow). The jump becomes that much more dramatic. Changing background colors as we move from one major topic to another or from one speaker to another can improve the presentation's continuity.

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It pays well to give a lot of attention to the details of dissolve effects. Carefully planned and spread out over two or more screens, they add considerable dimension to the total presentation.

### Animated Slides

Another element which I usually include in multimedia presentations is animated slides which seem to move on the screen when a special device (a spinning sheet of polarized material) is placed in front of the projector lens. Such slides have to be specially made with layers of polarized material. It's an ~~an~~ exacting and expensive technique. It should not be overdone (two or three times per presentation, at most).

Save this one for the major points in the presentation. For example, let's go back ~~back~~ to that "organic air flow" we're so proud of. And let's assume the following: (a) it's a huge improvement ~~over~~ over the "horizontal air flow" used in AFD; (b) we're presenting on three screens. By comparing the two types of air flow -- in motion and alongside our color-shifting, "gray type" slide (Figure 5) -- we can make an unforgettable impact.

Cinematic Effects

This is another major module of most multimedia presentations. Here are two ways of using movies; ~~\_\_\_\_\_~~

- Judiciously, throughout the presentation, several silent 16mm film clips can be intercut with the 35mm slides. The slide projector cycles to a blank as the clip is rolled. (It takes a few practice runs to get the timing right.) This technique is particularly effective when the speaker has a lot of words associated with only one slide. If the last frames of the film and the slide following the blank are the same image (and, again, if the timing has been rehearsed several times) a visually-exciting "freeze frame" effect is created.
- Large presentations which use more than 160 slides on a given screen require what I call "jury duty" films. These are three-to-six minute films (either silent or sound) which provide the time to make necessary tray changes. Do we really need that much time? No. The pros can change the four trays in less than 30 seconds (and, with practice, anyone can) ... but I've found that it pays to leave that extra margin of safety.

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Live Demonstration

If at all possible, I try to include a live demonstration of some sort in each presentation. Again, it's another technique for keeping the audience alert and interested by changing the pace and visual experience. I've used various approaches: from building blocks to ~~mobiles~~ [mobiles to complicated magic tricks to scale models to straightforward easel presentations. One thing to keep in mind here is visibility. If the back rows of the audience are going to have trouble seeing the demonstration, we have to back up the key points with slides -- or, better yet, closed-circuit television -- shown simultaneously.

Frequently, I use the demonstration as an outline for the total presentation or major sections of it. For example, in the building block demo, a slide of each block subsequently became the ~~topic heading~~ topic heading for sections that went into the details of ~~the~~ <sup>the</sup> concept *each block represented.*

Conclusion

These, then, are several modules I use to structure multimedia presentations.

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With experience, I have learned that good research on the presentation's message leads to the most effective use of these techniques; with experience, I have discovered methods for cutting costs and getting maximum use from the materials prepared; with experience, I have been able to take the attitude expressed by Roger Kahn in this paper's introduction and approach a new presentation with minimal terror.

But I'm still learning. With each presentation, I try new elements, new approaches, new techniques. Some of these work; some don't -- but the experience is worth it either way. And experience only comes with "hands on" experimentation.

Start by writing a script with exactly the visual and verbal impact that you want. Then, find out if the effects you want can be implemented. Once this is established, it's simple: find out how to do it ... and do it.

Technical multimedia presentations require careful planning, long hours, exacting attention to details and lots of perspiration. Sometimes things go wrong. Equipment breaks down; people make mistakes. The agony can be unbearable.

But when things go right, it's all worth it. I know of no more

exciting and rewarding endeavor in the field of technical communications

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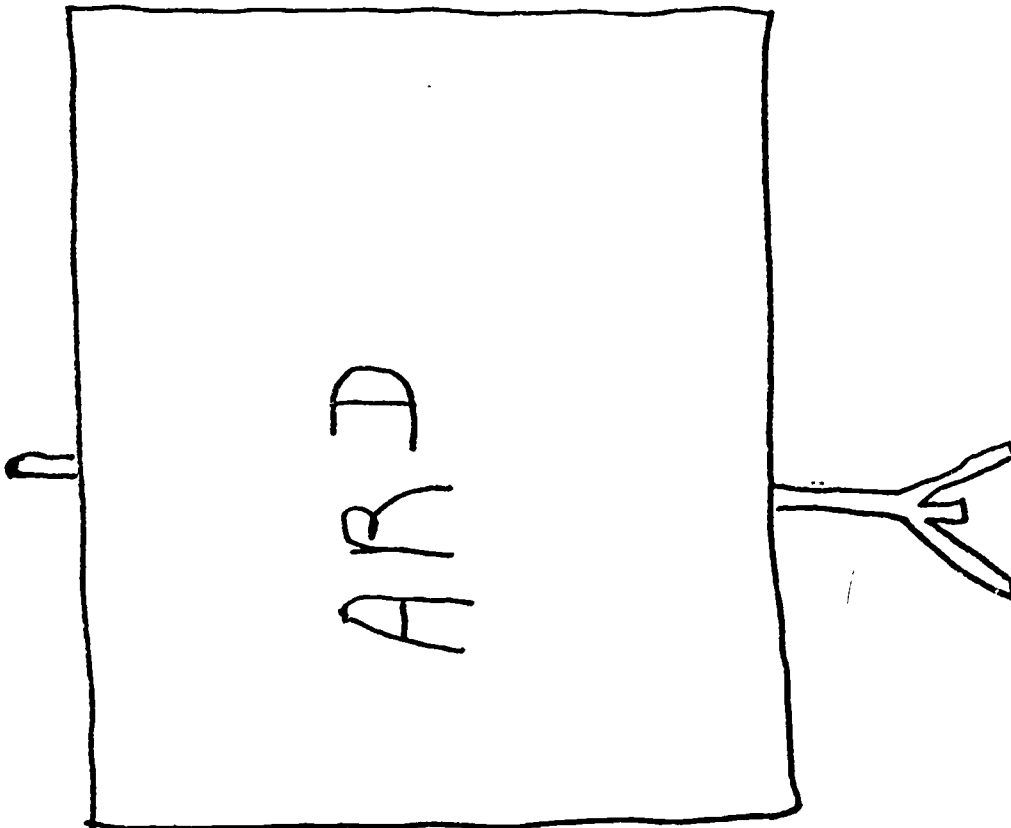
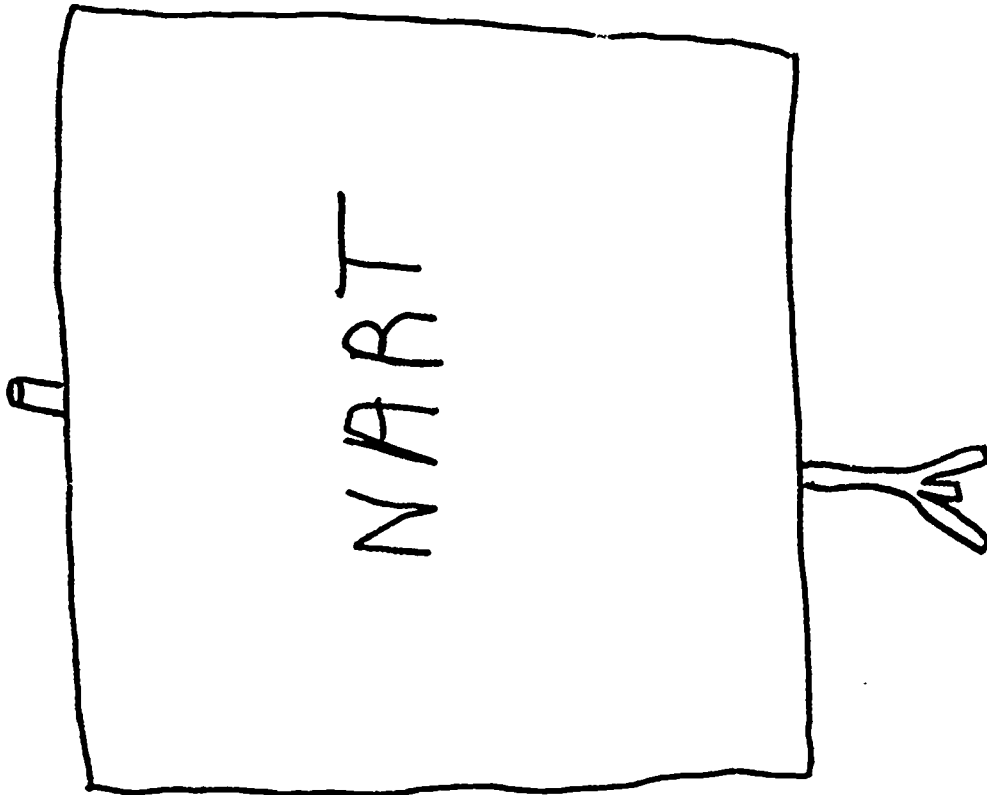
Notes

1. Kahn, Roger: The Boys of Summer; Harper & Row, 1971, pp. 74-5.

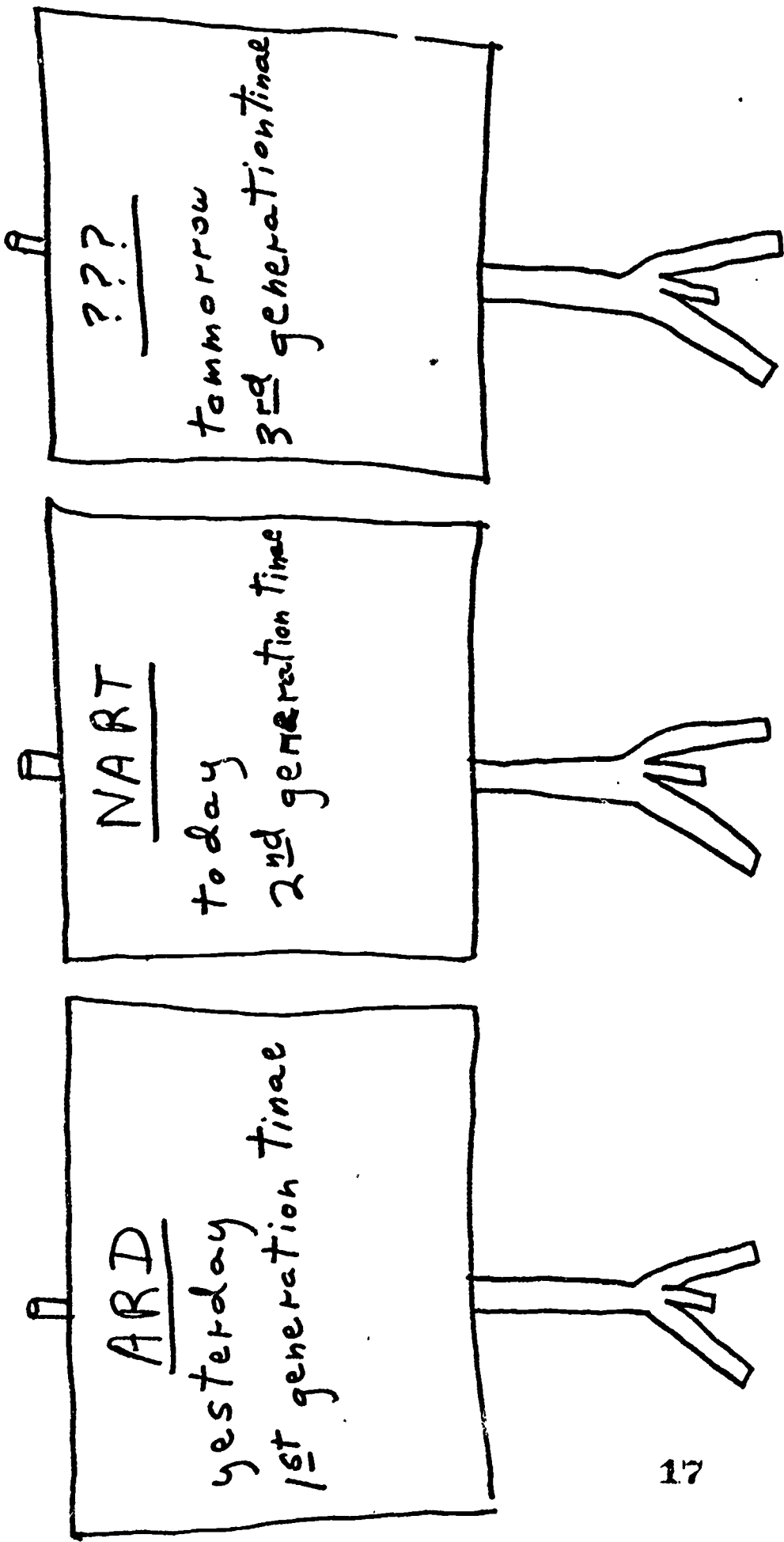
2. McLuhan, Marshall; Understanding Media; McGraw-Hill, 1964; p. 68

3. Ibid, pp. 7-21. And McLuhan, Quentin Fiore and Jerome Agel; The Medium is the Message; Random House, 1967.

4. Harkins, Craig; "'Baffle-Box' assists in scaling down multimedia presentations;" Technical Photography; October 1974; Vol. 6, No. 10; p. 20.







NART

- T-7 Electronic Drives

a.

NART

- T-7 Electronic Drives
- Organic Air Flow

~~2~~

b.

NART

- T-7 Electronic Drives
- Organic Air Flow
- Single-Chip Modem

c.

NART

- T-7 Electronic Drives
- Organic Air Flow
- Single-Chip Modem
- Weighs only 13 lbs.

d.

- NART
- T-7 Electronic Drives
  - Organic Air Flow
  - Single-Chip Modem
  - Weighs only 13 lbs.

d.

- NART
- T-7 Electronic Drives
  - Organic Air Flow
  - Single-Chip Modem
  - Weighs only 13 lbs.

e.

NART

- T-7 Electronic Drives
- Organic Air Flow
- Single-Chip Modem
- Weighs only 13 lbs.

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