A communication program for television

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A Communication Program for Television

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Degree in the College of Fine and Applied Arts
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May 21, 1977

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Acknowledgement

I would like to thank the Department of Communication Design, Rochester Institute of Technology, and Channel 10, especially Mark Wolf, for his knowledge in the field.
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Introduction

The purpose of this thesis was to develop a coordinated demonstration design program for WHEC-TV, a commercial television station in Rochester, New York. This program involved the creation of a symbol, set for television news broadcasting and related communication applications. The new Program developed from their existing graphic identity. This evolution included the review, analysis and redesign of the elements in current use. It encompassed an up to date news broadcasting area and attendant technical requirements.
Research

The major portion of the research was done on a visual survey basis with reference from two informative books covering television graphics and production. For background, local news broadcasting and national network shows in cities such as Buffalo, Syracuse, Boston and New York, were observed. Of particular interest was the stations identity and quality of set design.

Also collected were various examples of promotion materials from WHEC-TV including an article on the news team and present set design. (Appendix 1 & 2) The material suggested a need for new set design to accompany the well-qualified news team.

The research also included consultations with Mark Wolf, anchorman for WHEC-TV news. Mr. Wolf was of great assistance in explaining how a news set is assembled and also the use of special effects in producing the news program. Explanation of these devices appears in the appropriate sequence in the following pages.
Rationale

The primary objective was the development of a new graphic identity for the station, to include creation of a more interesting identity symbol and an improved, colorful typographic solution.

Elements of Communication Devices

In addition to the symbol evolution, a major concern was its use as an overall station identity element. The design of the set would incorporate graphic design and technical considerations.
Analysis of Present Symbol

In evaluating the existing identity it was useful to examine its positive and negative aspects. (Appendix 3)

Positive Aspects:

1) The lines suggest, to a degree, the line conversion of a television screen.

2) The symbol is well adapted for use in animation techniques for station identification.

3) The symbol presents the most original concept of any station in the Rochester television area.

Negative Aspects:

1) No set pattern is used in its application to advertisements, station identification and internal graphics.

2) There appears to be no standard rules of use for the symbol. It is used in any way the occasion suggests.

3) The basic shape has inconsistent features such as rounded edges on the numeral zero and sharp edges on the numeral one. These create a contradiction within the symbol.

4) The thin lines extending on either side and center of the ten have no obvious function other than a space filler. They are just an extra graphic element.
5) The space between each major line in the symbol is too small. The space does not appear clearly when the element is scaled down on the television screen.

6) The symbol is too complex.

7) There are too many uncontrolled variations of the symbol. These are modifications of the original and are attempts to simplify it.

8) There exists no typographic standards for use with the symbol. Observation has shown three different type styles have been used with the symbol.

After this critical analysis, many questions arose. What need is there for the thin lines in the symbol? Do they relate to the overall symbol? Can the symbol be made simpler and more interesting with changes inside the boundaries of the ten? Is there a need for added elements to the outside for attractiveness?

Proposed Changes

The old symbol needed many changes for better clarity. (Appendix 3)

1) To increase the symbolic meaning of line to the television line conversion screen.
2) To eliminate all unnecessary elements and determine configuration limits.

3) To use a more definite pattern of increasing or decreasing line intervals.

4) To investigate alternatives to serif or sanserif type styles in the numerals "one" and "zero".

5) To present the symbol in positive and negative, large and small sizes and with a type face to be used with all symbol applications.

New Symbol Rationale

The new symbol is not a totally different approach but an evolution of the existing form. The new one is fresh and functional in design with the line quality of the television picture. (Appendix 4)

The Design Proposal

The first consideration was the examination of two numerical shapes. This was of assistance in designing the central form. These shapes and design elements formed a pleasing symbol for the station.

After analyzing many types of numerals it was decided to begin with the "Standard Medium" typeface. From this was chosen the figure one with a circular form.
The sketches began with basic line studies as a possible direction for a line interval. (Appendix 5) Next were examined different intervals from very thin lines to very heavy, circular intervals starting from the center of the zero and radiating outward and intervals with outlined solid borders.

The next consideration was the placement of the two numerals together. Some solutions hindered the readability of the ten. Also was tried the use of a circle broken into intervals. The ten was reversed out of the center line. This test was not a satisfactory visual solution. (Appendix 5)

Maintaining the interval approach, a connecting line was used between the bars of the one and zero. In this series, a circular zero and a figure one with no top serif was used. The interval pertains to the black lines increasing in width in one direction and decreasing white intervals in the opposite direction. After a few sketches were made using the connecting lines, it was decided to try an alternative approach. (Appendix 6) The line caused disturbance in the visual clarity of the ten. However, the last sketch in this series led to a new direction. The connecting lines were evenly drawn across from the bottom of the line in the one to the line in zero. (Appendix 6)
This new phase suggested the making of the area between the figure one and zero totally black. (Appendix 6 & 7) This aided the visual impact of the design. It also helped the ten stand out that much more as a unit. This impact was due to the improved interaction of negative and positive space (figure ground exchange). The investigation of the line interval continued. There was, in this phase of the symbol, some portion that had to be removed. The total black area between the numbers was excessive. It distracted from the top and bottom of the zero. A portion of the center black area was removed from the horizontal bar at the top and bottom line interval. (Appendix 7) After this redesign, the interval worked with the figure ground more successfully in creating a legible figure ten.

The next sketches show many different line weight studies for this idea. (Appendix 7) The most successful sketch, shows the black lines of equal weight and the white lines gradually decreasing in weight, in both directions from the center. Following this idea many variations of line weight were developed.

After analyzing this direction, it was decided the interval could be lowered. (Appendix 7) This meant the white lines would decrease in weight from
the bottom to the top and the black lines would remain equal. A short animation sequence shows minimal changes to the symbol.

**Symbol Uses, the Animation**

The animation would be used as a station identification device. It began with the idea of relating the symbol to the time of day. The early programming would use the new symbol as an image for morning or sunrise. It would gradually change throughout the day at certain time periods: morning, mid-morning, noon, afternoon, evening and night.

The animation consists of eight images, each with different interval configurations. The first image in the animation is used in the ten for the new station symbol. The eight images and their changes are shown in Appendix 8, from top to bottom. The images from one to six, show a change in weight and direction. The interval in the new symbol gradually raises, bringing the darker, reverse-direction image up. Following this are two more images which complete the cycle back to the animation's beginning.
The animation goes through a full cycle and stops at the desired image for the time of day. At this stage, the time and temperature flash underneath the image. This is done for the viewers' convenience. (Appendix 9)

The next consideration was that of color. At first color was placed within the symbol's white areas. This created a lack of clarity within the symbol. (Appendix 10 & 11)

The next color idea used each image in black on a solid color background. This idea became the final solution. The colors were to range from yellow-orange for morning, blues for mid-day and greens for night. Eventually this color idea was changed to a rainbow effect. This allowed the colors to flow more smoothly. (Appendix 12 & 13)

With color use, the major concern was that they translate into grey values on black and white receivers. The grey values range from light grey to a light, medium grey, back to light grey. The grey had to be light in value, not interfere with the tone of the symbol.

The aspect of color television is sometimes taken lightly, in its translation to black and white. The research in this area led to a book called The Manual of Television Graphics.
This book describes the tonal relationship of color to black and white.

Yellow-light grey
Orange-light to medium grey
Red-medium grey to sometimes dark grey
Purple-medium to dark grey
Green- " " "
Blue-dark
Deep Blue-almost black

The selection of color, for this program, was complex. For example a full range of colors (depending upon their density) can all translate to the same similar greys creating an undesirable monotone.

The color problem was discussed with the staff at the Media Production Center at Rochester Institute of Technology. The staff utilizes a chart, prepared there, which shows colors in relation to grey values. This chart made possible the specifying of colors in relation to the Pantone Color System, a national color standards system for printers.

Using a black and white video camera on these colors made possible the formation of a rainbow of functional yet pleasing colors. These colors also held together as needed in the grey tone area.

(Appendix 14)
With the colors in place, the symbols were related over their prospective color backgrounds. (Appendix 15)

Elements of the Symbol

After the symbol and animation were prepared, the work on the typography was begun in relationship to the symbol.

It was important to relate a clean, crisp type-face with the new identity symbol. The choice was a sans serif type named "Universe 66". After setting WHEC-TV in this type, it was obvious that the weight at the bottom of the W and V was too thin. This caused a visual disturbance. This problem led to the change of type faces to "Helvetica Medium". The weight at the bottom of the W and V was thicker and related more appropriately to the symbol's proportions. (Appendix 16)

The type placement is very simple to understand. The WHEC-TV, is in Helvetica Medium and the address is done in Helvetica Light. (Appendix 16)

1) The type, WHEC-TV, is placed below and at the same length as the symbol. The space between the symbol and type is equal to the height of the symbols second white line from the bottom.
2) The type is placed flush to the bottom of the symbol on the right side. The distance of the type away from the symbol depends on its application use.

3) The WHEC-TV plus address is placed in a block flush left on the right side of the symbol. This also depends on its application use.

The next element is color. The basic color for the printed symbol is to be in black or dark orange. (Pantone 164, Appendix 14) The black symbol would be used with a series of three color stripes; blue, deep orange, and light orange, with black type. These colors are in order and selected from Pantone colors 306, 164, and 137 from the animation sequence. The dark orange symbol would be accompanied by the type in black.

Applications of Type

The next phase in the application of the identity elements consisted of a letterhead, business card and envelope. Each was arranged in a clear, functional way, corresponding to a unit grid based on 10 point type. (Appendix 17)
The letterhead is 8½" x 11" size with the symbol in orange showing the beginning of the body of the letter. The call letters and address in black indicating the beginning of the left hand margin.

The envelope is designed in a similar manner with an orange symbol. The address block is placed flush left, in line, to the right of the symbol and is printed in black. This creates a line which the envelope address is typed and is placed even with the symbol.

Finally, the business card has been designed to fold once vertically. The outside is printed only with the orange symbol. The inside is coordinated with the envelope and letterhead.

Vehicle application of the symbol was considered next. The units used were a van and four door sedan. Each vehicle is designed in white with three stripes of color. (Appendix 14, Pantone 306, 164 and 137) These stripes ascend from a base line on each vehicle. The symbol and call letters are placed in specific areas for better visibility. (Appendix 19)

The microphone identification is a cube in which the symbol is a positive image on one side and a negative image on the alternate side. (Appendix 19)
Analysis of Existing Studio Set

The final phase involved the redesign of the station's present news set. The evaluation of the present set follows: (Appendix 20)

1) Basically, the set takes up too large an area in the studio and limits camera movement. This is vital for a well produced show.

2) The set is on a multi-level platform which creates lighting problems.

3) Each newsman's stand is small and the table area for placing reading material is too limiting.

4) Because of the several levels, one person sits and the others stand. The highest unit is smaller in height, making the seated person appear distorted when compared to the rest during broadcasting.

5) The standards for the set fail to include monitors or clocks for the commentators. Their present location is off the set which creates extra problems of space for camera movement.

6) The weather set presents serious problems. It has a series of gauges which are never used. Three maps exist, that show a black film line from the residue left when the map is cleaned.
The awkward design creates a gutter that collects marker ink. The weatherman must push each map. This appears awkward on television and often creates difficulties for the weatherman.

7) The use of thick shag carpet presents problems by attracting dirt and showing heavy wear.

8) The present set shows signs of misuse and deterioration. Also paint is chipped from the edges of the news units.

9) The colors used on the set are visually uninteresting. The overall construction of the set is in need of updating for more convenience and efficiency. Even considering these problems, the set is still the most contemporary news broadcasting unit in Rochester television.

Rationale for News Set Design

Working with the television station and considering the real need of production in the news area, provided a starting point. The opportunity of being totally involved in the technical aspects necessary to make a news set work was an excellent experience. The set is used as a mechanical, as well as a graphic (visual) element.
A unique and workable design has been created for television in this area. Working under actual set conditions, the set was tailored with those standards in mind.

The set should be interesting, versatile and stimulating. It must be able to incorporate the technical elements and function as a total unit.

The graphic element involve the identity symbol, type and color. The purpose of the set is to function for the convenience and efficiency of the news personnel.

The New Design

The basic concept for the new set design was the use of modular units. This would give the station the flexibility to change the set floor plan periodically, providing variety for the viewer.

Each unit, with the exception of the weather unit, is designed to have a built-in television monitor and digital clock. (Appendix 21) Additional desk space is provided for scripts, etc. The news and sports units are designed, based on a cube with rounded corners. The front corner is to face the camera. Each unit is provided with a swivel chair on casters.
The weather unit rotates from one map to the next. (Appendix 22) It rides on an *inside track* which allows it to drop into specified grooves, thereby holding it firm, until it is time to change maps.

The units are color-coordinated, providing a visual unity. Each has the same color stripes as the vehicles. (Appendix 23)

The symbol is used only on the main unit in the news set. One symbol, with the call letters below, appears on each side facing the cameras. Tan was chosen as the base color rather than white. Raw white is too reflective for the sensitive lens of the television color cameras. The symbol and type appear in black above the three color stripes. The other units will have the color stripes only to act as a unifying theme for the set.

**Special Effects**

The news set, designed for more than just visual effect, is a functional piece of technical equipment. It involves many different special effect devices. The cyclorama is a seamless piece of wood or cloth stretched around the studio to provide a backing for a production.
It is used with the Chroma Key electronic process for television. One camera shot or several camera shots can be inserted one into another. This is the process whereby the still and motion pictures are flashed behind the newscaster.

Another unit is the character generator. This enables type on the screen to show credits, weather details, etc. The unit has different ways in which the type can move. It can roll at varied speeds and move across the bottom or top of the screen at different speeds. This effect is known as a crawl. The technical uses of each part of the set, necessitates consideration of these requirements as well as good design on the surface.

**Camera Movement & Lighting**

Two major parts of the news production include the camera movement and lighting. There are two cameras used on the set. Camera one covers the following areas: (Appendix 24)

1) **Area A** is used for the long shots of the beginning and end of the news.

2) **Area B** covers the long and close up shots for the news unit and special report unit.
3) Area C covers the long and close up shots of the sports unit.

4) Area D covers the crossover shot going from the newscaster to the weatherman. If the sportscaster is not at his unit, it can be moved back so the empty desk is not within the camera frame.

Camera two covers the following areas:

1) Area A covers the long and close up shots of the weather.

2) Area B covers the angle shots for the sports and news units. It also covers the crossover from news to sports.

These two cameras cover all the angles needed for the basic shots of the four units.

The next illustration shows the lighting arrangements. Research is this area was done with the aid of a book called Television Production.

The Lighting:

1) How one covers the "back lighting" (200 foot-candles) for the highlights on hair and shoulders and separates the subject from the background. The general positions and purpose for these lights are found on the chart in Appendix 25.
2) Row two covers the "effect" or "set" lights (100-200 footcandles) which emphasize the dimensions of the set.

3) Row three covers the (A) lights which are "fill" lights (100 footcandles) which soften the shadows.

The (B) lights are "key" lights (200 footcandles) that illuminate and model subjects as the principal source of light.

This lighting plan has been designed to provide the most effective even lighting for each unit and for the set as a whole.

Conclusion

The set, graphics and people are three parts that make up the television news. This program has been a great learning experience in television media. Color, black and white, special effects, lighting, cameras, graphics and sets are all the minor and yet major elements that comprise the making of a television station.

My goal was to work with the television station in developing a functional news set and graphics to improve their visual identity to the public.
The objectives were to develop communication devices for a television station involving these standards:

1) Informal appeal to the viewer.
2) Legibility of elements.
3) Timelessness of graphic elements.
4) To devise a workable piece of equipment (the set) involving the special techniques for production.

With this work completed, I draw my graduate work to an end, knowing I have met all of my objectives. Most important, I am pleased.
Appendix
FIREFIELD
SUNDAY 2 P.M.

DO NOT DISTURB
SUNDAY 2 P.M.

THE HOT ONES!
TONIGHT

60 MINUTES
7:00 BIG NEWS STORIES
YOU CAN'T GET
ANY PLACE ELSE.
CBS News Correspondents Mike Wallace,
Morley Safer and Dan Rather probe for
a fresh slant on what's happening
behind the headlines.

THE SONNY & CHER SHOW
8:00 LAUGHS, MUSIC.
FUN. SONNY &
CHER HAVE GOT IT
ALL TOGETHER.
They're the hosts with the most.
Dishing out bountiful servings of gags,
glamour and guests.

KOJAK
9:00 KOJAK'S
YOUNG NIECE
HELDS LIFE-FOR-A-
LIFE HOSTAGE!
It's her life in exchange for a captured cop
killer. Kojak must choose! Telly Savalas
stars.

NEW SHOW!
DELVECCHIO
10:00 DELVECCHIO
PUTS HIS LIFE
ON THE LINE TO SAVE
STOOLIE FROM DEATH!
Police detective Delvecchio tries to help a
police informer go straight. But is he walking
into a baited trap? Judd Hirsch stars, with
Charles Haid.
This is the second article in a series on the local television stations' news operations.

Channel 10 is currently presenting the most professional television newscast in Rochester in terms of presentation, scope of stories and use of film.

News director Warren Doremus has put together a news team with good balance between experienced people and energetic newcomers. The size of the staff allows them the luxury of going beyond the headline news to do time-consuming series and feature stories.

Unfortunately TV-10 News isn't always interesting to watch, primarily because of the futuristic, sterile news set the viewers are stuck with, between film clips and the stuffy, too-serious tone that is often evident. Although the set isn't as important as the content of a newscast, television is "Noon" newscast. She does an excellent interview and she has a sense of humor, which showed up recently in some fun features she did for the evening news.

Of course, Wyoma Best is one of Channel 10's longtime assets both in reporting ability and her insight into the problems of minority groups. Her recent series, "The Black Dollar," was a fascinating report on how wealthy black people spend their money.

No doubt the emphasis on series at Channel 10 news reflects Doremus's interest in series and documentaries. Before he became the news director, Doremus won several awards for his documentaries, most recently for "Riots Plus Ten Years," a follow-up on the race riots. Although his delivery is ponderous and somewhat funereal, perhaps a carryover from the old days of broadcasting, Doremus is a visual medium. Channel 10 indicated awareness of that by choosing Mark Wolf as anchorman. Wolf is Rochester's "pretty" anchor, but he has a smooth delivery and manages to keep cool. One evening recently "technical difficulties" fouled up the film clips for three stories in a row and Wolf carried on unfulstered.

The BACKBONE of the newscast is the reporting staff. Mike Power is an experienced reporter with a flair for hitting the key questions in an interview. Power showed his versatility one evening recently when he did a hard-news feature on a young man who was abducted from a filling station, and later a sensitive lifestyle piece on a wino.

David Nolan, the new morning news anchor, is handling a variety of stories, as is Ray Levato. Reporter Michael John is still learning the first-rate newsmen who knows the community.

A MAJOR criticism of the Channel 10 news team is that zealously sometimes carries them over the borderline of good taste. An interview with a badly beaten young man last year was not only tasteless, but it indicated bad news judgment. The bleeding and moaning of accident victims does nothing to inform the viewer.

Sportscaster Richard Funke and meteorologist John Hambleton round out the weekday anchor team. Funke got his experience on radio, but he looked comfortable from the first day he went on television. He can run through sports scores smoothly enough, and he adds a lot of interest for non-sports fans with film and interviews. Recently he interviewed

Turn to Page 50
J.K. Wilber Inc.
1500 Riverside Avenue
Buffalo, N.Y. 14203

Dear Mr. Wilber,

Several weeks ago you asked me to let you know when it would be convenient for me to see you in Rochester about your television advertising campaign with us.

I find that I shall be free all day on Thursday, April 23, and will be delighted to meet you in my office at whatever time may be convenient to your schedule.

Sincerely yours,

George S. Smith
Sales Manager
More than meets the eye...

Every evening at six and eleven PM, TV Ten's news features Mark Wolf, Richard Funke and John Hambleton. The viewer, however, does not always get the opportunity to see all these people who gather, report, write, produce and edit and help present our nightly news... 11 reporters, 5 cameramen, 2 producer directors, an assignment editor... a team that constitutes Rochester's largest TV news staff. Their talents, knowledge and experience are just more reasons why we are Rochester's Number 1 News Station.*
<table>
<thead>
<tr>
<th>Light Source</th>
<th>Type</th>
<th>Size (watts)</th>
<th>Position</th>
<th>Purpose and Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>KEY LIGHT</td>
<td>Spot</td>
<td>1000</td>
<td>Front of subject, above the subject. Normally positioned in an area 30° to the left or right of the camera-subject axis. Strikes subject at approximately a 45° angle.</td>
<td>Illuminates and models subject as the principal source of light. It reveals basic form and emphasizes features. Key light also creates shadows.</td>
</tr>
<tr>
<td>FILL LIGHT</td>
<td>Scoop or Flood (broad)</td>
<td>500-1000</td>
<td>Front of subject. Normally positioned lower than the key light in an area 30° to the left or right of the camera-subject axis. It is positioned opposite the key light.</td>
<td>The fill light softens shadows caused by key light and balances the light on the subject. The fill light also determines the lighting contrast (high key or low key).</td>
</tr>
<tr>
<td>BACK LIGHT</td>
<td>Spot</td>
<td>1000</td>
<td>Behind and above subject. Strikes subject at approximately 45° angle. The back light is not usually positioned directly behind the subject because the subject blocks most of the light. Better separation is provided if the back light is positioned a bit to the left or right of subject.</td>
<td>Highlights hair and shoulders and separates subject from the background.</td>
</tr>
<tr>
<td>CROSS LIGHT</td>
<td>Spot</td>
<td>1000</td>
<td>Approximately 90° to the left and right of the camera-subject axis.</td>
<td>Same as key light and fill light combination, used when lighting in front of rear screen or projected background. Should only be used when key lighting is not possible.</td>
</tr>
<tr>
<td>SIDE BACK LIGHT</td>
<td>Spot</td>
<td>1000</td>
<td>Behind the subject at an angle approximately 45° to the left or right of the camera-subject axis.</td>
<td>Same as back light.</td>
</tr>
<tr>
<td>EFFECT OR SET LIGHT</td>
<td>Spots and Floods</td>
<td>300-1000</td>
<td>Varies with sets.</td>
<td>Emphasizes dimensions of set. Indicates specific mood or change in time or place.</td>
</tr>
<tr>
<td>EYE LIGHT (CAMERA LIGHT)</td>
<td>Small Spot</td>
<td>150-200</td>
<td>On camera or moveable stand.</td>
<td>Produces sparkle on performer’s eyes or teeth. Might also be used to light graphics.</td>
</tr>
</tbody>
</table>
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Television Production: an introduction
by Donald L. MacRae, Michael K. Monty, Douglas G. Worling
Copyright 1973 by Methuen Publications, Printed in Canada.

Manual of Television Graphics