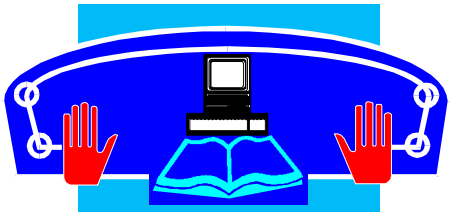

A Sample Of In-house Regional Staff Training - Interpretive Workshop Summary

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YELLOWKNIFE WORKSHOP ON INTERPRETATION IN MUSEUMS AND VISITOR CENTRES

INTRODUCTION

The historical, natural and cultural heritage of the north is celebrated in both museums and visitor centres. Both types of centres use interpretive techniques to provoke the interest of their audiences. On September 11th and 12th, 1988 in Yellowknife an informal workshop on interpretation was organized by the Department of Economic Development and Tourism in cooperation with the Prince of Wales Northern Heritage Centre.

Through a series of short sessions a wide range of relevant topics were discussed, including exhibit design, knowing the audience, AV programming ideas, and operational experience. This simple document is intended to capture some of the highlights of the sessions. It is by no means a complete guide to interpretive programing. It is, however, a loose summary of issues, approaches and objectives. Anyone interested in developing a small museum or visitor centre in the N.W.T. should review this document as a way of stimulating ideas and alternatives. For more detailed information of some of the ideas contained herein, piease contact the Department of Econmic Development and Tourism or the Prince of Wales Northern Heritage Centre.

Robin Reilly

INTERPRETATION AS A FUNCTION - Michael Murray

This talk was illustrated by a slide show which covered many aspects of interpretation, particularly signage, how to attract and interest your audience, use of models instead of text, and incorporating local products or crafts into an exhibit to convey the message.

Signage

It is sometimes necessary to tell a story about a building without having public access to that building. In Charlottetown, Parks Canada constructed an attractive rose arbour in the style of the historic period to interpret the Pope House, former home of one of the Fathers of Confederation. Through text and photographs in a pleasing setting, the exhibit designers were able to tell the story of the house and its owner, without entering the building which is now privately owned.

The use of an old photograph on a sign to demonstrate traditional activities in an area, such as fishing or hunting, helps to give the modern viewer a feeling of continuity. Black and white or sepia photos contribute to the nostalgic mood.

If a sign is to be portable (i.e., if interpretive centre staff will have to move it from one location to another) ensure that it is designed to be carried easily.

Interpretive centre and museum visitors usually fall into one of three categories. depending on how much time and effort they devote to viewing an exhibit: Streakers, the majority of people (80%), Strollers (15%) and Studyers (5%). In order to relay the message to the maximum audience possible, use only the minimum amount of text possible. Use of different type size and colour will enhance the appearance and conveys the messages on three levels: large, brightly coloured type to bring out the main points, slightly smaller type for the secondary information, and smaller still for the greatest amount of detail.

The use of many photos and minimum text on a sign will add interest, particularly for the

"Streakers". It may also encourage them to come back when they have more time.

If more than one language is used in the text, it is helpful to use a different colour for each in order to distinguish them.

How to attact and interest the audience

If an interpretive centre is located near an area which attracts many people, such as a beach or viewpoint, the designer needs to be original in the approach chosen to divert the visitor for long enough to interest him in the exhibit. It is often a good idea to present the information in a style which suits the place and the mood the audience is likely to be in. One unique method successfully used near a popular beach on Prince Edward Island was to use six foot high "comic books", arranged in two page spreads, situated under an awning to provide shade and adjacent to an ice cream stand. The comic book characters were appealing to adults and children and were eventually developed into "real life" costumed characters who moved amongst the sunbathers on the beach, talking to the children and bringing the whole exhibit to life.

This idea has proven to be so successful that UNESCO have translated the "comic book" into sixteen languages and "T" shirts, comic books and other merchandise were produced to reinforce the story.

The use of brightly coloured signs, humour and easily identifiable images, such as cartoons or simple animal drawings, is an important technique in attracting people, particularly families, to an interpretive trail. If people can identify potential "rewards" such as the possibility of seeing an unusual animal or bird, they will be more inclined to use the trail.

The use of large murals can be a way of making a large indoor area more inviting; for example, in a park registration building, while one parent is filling in the paper work, the other can divert the children's interest with an attractive mural and related exhibitry which is situated adjacent to the registration desk. The message contained in the mural can act as a catalyst, informing the visitor of the attractions in the area and stimulating their interest for more detailed information.

Life size sculpture is another dramatic way of gaining a visitor's attention, especially if the models are particularly lifelike. A group seated at a picnic table, for example, with room for real people to join them, will form an extremely popular backdrop for photographs. It will probably be necessary to move an exhibit such as this on an annual basis in order to protect the surrounding ground.

In order to "sell" other features of the interpretive area, such as other trails, mention can be made of them in signs on the primary trail, by relating one area to another. A particular type of plant, for example, could be highlighted, and mention made that other species of the same type will be found on Trail B.

A "dynamic exhibit" is one which changes regularly (e.g., once a week) to reflect current activities in the interpretive area. These types of displays can make the arrival of a bird species or the flowering of a plant seem like an event.

If resource conservation is important within the interpretive area or exhibit, make sure that the reasons why the resource is in danger are clearly and simply explained. In this way an exhibit does more than just increase knowledge; it comes to change the attitudes and so behaviour.

One original idea of appealing to a younger audience was to create an "interpretive playground", using equipment which reinforces the story to be told. Children were encouraged to imitate animals through play: sliding down a slide like otters, wiggling though a tube like salmon, jumping like frogs between "lily pads" made of old tires.

Using Models instead of text

Avoid using too such text on a sign - be creative in thinking of alternative ways to convey the message, such as with models, perhaps incorporating artifacts into the model to demonstrate how they were used. The remains of prehistoric cooking utensils or hunting weapons has little relevancy for many people, but incorporating these same artifacts (or small replicas of the artifacts) into models of people from the time using them, will bring the exhibit to life. People can more easily identify with information with which they already have some familiarity.

In the same way, a structure which relates to an exhibit's theme will enhance its appearance and make it more attractive to the casual visitor. For example, the Fox Moth Gallery at the Prince of Wales Northern Heritage Centre will be using shipping crates as display cases, but also to add interest to the airplane's surroundings. Another example would be to use a child's building blocks many times enlarged to house an exhibit on toys.

If a model or artform is used that is perhaps a little obscure in its meaning, it is essential to have accompanying text provide clues to its meaning and to explain the significance, otherwise it may be viewed as just another piece of art.

Incorporating Indigenous Crafts into the Exhibit

Incorporating indigenous arts and crafts into an exhibit to illustrate a story adds a unique local flavour and contributes to community pride and involvement. A hooked rug which tells a story, or shows a geographic landform can be an attractive work of art which could perhaps be reproduced as a poster or printed in a book and then becomes transportable.

The interpretive sign system for the Dempster Highway is planning to use delta braid in its signage, to add local identity and interest and to stimulate the purchase of local handicraft.

KNOWING THE AUDIENCE

Michael Murray and Lynette Harper

More than 30,000 visitors a year visit the Prince of Wales Northern Heritage Centre in Yellowknife, and for simplification they can be divided into two categories: one time visitors, such as tourists or visiting dignitaries; and local residents who visit the museum two or more times during the year. In actual visits, those by local residents outnumber those by tourists and other one time visitors.

Mike pointed out that the nature of leisure is different from the nature of work; leisure allows freedom of choice, immediate rewards, variety and relief from stress, whereas work has the exact opposite attributes (for most people).

Museums have to compete in the "leisure time marketplace" to attract visitors who might otherwise go to waterslides, funfairs, shopping malls, etc., and the following list contains some of the reasons why people visit museums:

information
- validating the experience of their trip (i.e., "I was there")
- social interaction (research shows that people generally visit museums in groups, either of family or friends)
- personal interest/self image [people choose an activity which interests them;
- novelty of exploration
- participation and rewards
nostalgia
- feeling comfortable in the environment
challenge of new experiences

People go to visitor centres for many of the same reasons, but in addition they often have immediate needs for orientation, direction and guidance about what to do.

Research also shows that only 20% of the total population actually visit museums and interpretive centres. Planners should try if possible to address the issue of why people DO NOT come to

museums and to make the museum a place which people will feel attracted to visit.

People may decline to visit a musem because they feel uncomfortable in the environment - they feel restricted by the “don’t touch” signs and feel obliged to whisper. The Discovery Gallery in the Prince of Wales Northern Heritage Centre is a successful example of an attempt to involve visitors in the exhibit by using all the senses - touch and smell, as well as look and listen. Social interaction is encouraged in a comfortable learning environment.

Research on the expectations which an audience may have is a valuable planning tool. This can be gathered through government tourism studies, or through informal “polling” of local tourist industry operators, such as hotels, information booths and so on. In the north, visitors generally are interested to learn as much as possible about the area they are in, and the planner should find out whether visitors to his area usually visit more than one place, what they want to see, and what they could be “led” to see. When the visitor leaves the museum or interpretive centre, they should have had their appetites sufficiently whetted that they will wish to explore further on their own to see “the real thing”, such as a carver working in his home or a local landmark. The interpretive centre could act as a stepping stone in encouraging local people to make such visits possible for a tourist.

Involving local residents in the planning and design of an interpretive centre or museum is an integral part of the overall process. Too often, planners think only of the tourist audience, and forget that local visitors will comprise the bulk of the audience during the course of the year. Northern native organizations and people have been excludes for too long, and they are anxious to be involved not merely in the input stage, but in the total process of decision making, design and content.

The name “Interpretive Centre" is important from the point of view of not excluding the local community, as "Visitor Centre" might do.

By involving the local community, the residents feel they have “ownership” of the interpretive centre or museum. If a planner can keep an open door and ensure that the community knows he

wants to hear from them, he will build up good will and acceptance. Local translators can be hired to prepare the exhibit labels; elders can be employed as guides. By involving young people and encouraging visits from schools, the incidence of vandalism may be reduced as well.

The Moosehide Boat Gallery in the Heritage Centre is a prime example of how a whole community was involved in creating an exhibit which told their story. Like the layers of an onion, there were many levels of involvement from different groups, and the exhibit brings out this involvement through photographs and film. Many museum visitors bring preconceived illusions with them, and a skilful exhibit will be able to destroy these illusions and replace them with reality.

Another important piece of information which interpretive centres need to give to tourists is "how to behave" in the community. Tourists want to know what the boundaries are in terms of photographing local people and sights, and whether or not to approach residents in their homes. It is important that the tourist understands that residents are not "walking exhibits". It is important, also, to make sure the exhibit is realistic - if there is a downside to the story, it should be portrayed sensitively, to avoid a distortion of the total picture.

At Expo 86, every Canadian pavilion except the N.W.T. told the story of the native people as the "first peoples" of the area, but excluded their story from the continuing history and modern day development. Only in the N.W.T. pavillion were the native people shown as integral to the story in the past, present and future.

VISITOR CENTRES AND MUSEUMS
SIMILARITIES AND DIFFERENCES

Goals:

The main goal of museums has often been to collect, conserve, document and exhibit, however the move nowadays is towards mounting exhibits which are both educational and enjoyable. Museums are attempting to bring social benefit to the audience, and not merely to portray the local heritage.

An interpretive centre can be narrowly themed, according to the story they wish to tell or the mood they strive to create. A museum must be more broadly based. In terms of dollars, it is presently easier to obtain funding for an interpretive centre than for a museum. This is because visitor centres are seen as having a greater role in promoting visitation to an area. The success of a visitor centre is thus judged in terms of its ability to encourage people to spend time (and money) going to see the "real thing". A museum is more internally focussed as samples of the "real thing" are on display.

Management:

The questions which must asked when addressing the issue of management of a museum or interpretive centre are: -who controls the facility and what organizations should be behind it?

Interpretive Centres can be managed by a local tourism group, or by the municipal government, or by the Chamber of Commerce, or by local industry (such as the Tar Sands Interpretive Centre in Fort McMurray, Alberta).

Museums are usually run by federal, provincial or territorial governments, or are founded by special interest groups on a volunteer basis, such as the Northern Heritage Society. This volunteer effort grows into a non-profit society and may eventually be taken over by government. There are a few private museums, run by industry.

A very important factor to bear in mind is that any community museum is essentially a small business, with capital (invested in the collection), staff, goals and other attributes essential to running any small business.

Collections:

Museums usually own their collection of artifacts, or they borrow exhibits on long term or permanent loan. Interpretive Centres sometimes own artifacts, or they may develop a storyline and then try to borrow the artifacts to match. Museums tend to try to convey information about "things", interpretive centres try to create feelings or attitudes towards potential experiences.

The question of repatriating artifacts to their original area is of current concern, but this depends very much on whether the receiving organization has appropriate storage space. There is a heavy responsibility in repatriating artifacts in that the item must be preserved "for ever" by the museum and must therefore be stored carefully. Display of fragile artifacts requires special lighting and humidity controls and may be difficult to accomplish in a small interpretive centre. It is possible to replicate the artifact using a plaster cast, or to display a secondary item which is less valuable.

CONSERVATION OF THE COLLECTION - Barb Winter

There are four physical areas in the collections section of the Northern Heritage Centre: the registration area, where artifacts are numbered and cataloged; the conservation area, where fragile objects are carefully preserved and protected for storage and display; the shipping area; the storage area. These types of areas differentiate a visitor centre from a museum.

Registration Area

Well-meaning tourists often retrieve artifacts from the land and bring them to the museum. A better route would be for the tourist to leave the object where it was found, noting its exact location and description, and informing the museum staff who will then send experts into the field to retrieve the article.

A computer link with Ottawa provides access to an enormous national data base, comprising several million pieces, located in museums across Canada. Each of the artifacts arriving at the Heritage Centre is cataloged and entered into this national data base.

Conservation Area

Preservation and restoration of the artifacts is extremely important. Conservers play an important role and can give expert advice on how materials degrade and how this can be prevented. Correct lighting and humidity controls for display cabinets is also important, and the Heritage Centre conservation staff are available for consultation.

When consulting a conserver about artifacts, information relating to the nature of the exhibit is important. Will it be a traveling or static display? How will the artifact be displayed?

Storage Area

Vulnerable objects, which may be contaminated by insects or other destructive influences, are stored in isolation for three months.

Cold storage is provided for objects which would deteriorate at room temperature.

Other articles not on display are stored on hangers or shelves.

A/V, FILMS AND PHOTOGRAPHS
Jamie Stevens, Lanny Cooke, John Alda

"The Emerging North", the N.W.T. Expo 86 film, was shown, and Lanny spoke of the need for a client to give clear guidance to film makers in order to keep research costs down to a minimum. Potential clients should allow adequate time to make a film properly (up to a year or more may be required if seasonal shots are needed). 16 mm film renders a good quality image and translates well to video. Film can be used successfully in a museum setting.

Jamie showed a slide/tape presentation his company has made in the Maritimes. He stressed the need to think about the audience and to formulate objectives. Think about the location of where the slides will be taken, and check to see whether there is existing material on the same area or topic. Prepare a reference package for the show's producer, giving the storyline, listing existing shows on similar topics or areas, old and new photos which could be used, on site inspections which will be required, and the number of approval stages.

If feasible, a Request for Proposal should allow prospective competitors to be paid for their bidding work. However, if the budget is restricted, consider using a two part tendering process; find out who the film makers are and what they can do, and in a second tender ask for a dollar quote. In this way, the most creative film makers can be identified before the dollar figure is known, allowing a decision to be based on creativity, not necessarily on the lowest bid.

A slide/tape show allows good sound reproduction and a high quality image when projected on a large screen, and multi-image techniques can also be used. If the show is translated to video, between thirty and forty per cent of the impact is lost. The film maker should be informed at the start of the project whether the work will eventually be translated on to video so that allowances can be made in the initial shooting, to reduce the loss at conversion.

To obtain a suitable musical score, consult a record (music) library, or enlist the aid of someone who has a wide musical background. Explain what is

required by describing the action in the show. The disadvantage of using a library is that it can be extremely time consuming, and in the long run it might be more cost effective to go to a composer/musician and start from scratch.

In the end, the budget will dictate whether film, slide/tape or video is used in the exhibit. The first two mediums can both have a powerful impact on the audience but require more complex equipment. Video is often of poorer quality but uses simple less expensive technology to display.

Equipment will break as it is used, so ensure that an installation manual is provided which lists all the equipment originally installed, with service manuals for each separate piece of equipment. Suggestions on servicing, replacement lamps and other parts, suppliers, prices and other technical information should also be requested at the time of installation.

Back–up equipment should be purchased when setting up the exhibit so that no shutdown will be necessary to make repairs. In any contract for equipment installation, a specific warranty period for repairs should be stated, and the client should insist on having an operation and maintenance manual. Master tapes and and sets of slides for a specific period should also be provided at installation.

John showed a slide tape programme which had been translated onto film. He explained that at the Wood Buffalo Park Interpretive Centre visitors can make their own selection of video to watch, or they can play with two interactive computers which offer ten different programmed. He stressed that if technical equipment is incorporated, then staff who will use it must be trained.

Attached to this document as Appendix C is a manual on producing an audio/visual show.

Message

What are all the stories you want to tell? When you have thought of everything you can, sort out what you ACTUALLY want to say, and what you want people to remember.

Linking the ideas

A common approach to developing the main idea of "storyline" for an exhibit is to begin by listing down all the relevant facts, ideas, stories, events etc. which could be developed. Next try to see a thread or theme which could tie together the larger ideas. Now go back with the theme in mind and look for more detailed information. The storyline thus serves as the skeleton about which other information and' images is structured. Remember, don't try and say everything, rather focus on a main idea and try to develop it in many ways.

What link can be used to tie all the ideas together? Perhaps by examining toys and games, the changes in northern culture over the centuries can be portrayed. Another idea might be to use the theme of "lines", as in Arctic Circle, DEW Line, north-south geographic line through centre of Canada, traplines, and so on.

Approaching the site/exhibit/gallery - exterior space

The approach to an interpretive site, exhibit or museum gallery is important to set mood and build expectation in the mind of the visitor, by using available space en route for displays, signage or other mediums. The journey could start at the local airport, with a sign or poster inviting people to come to the centre, or an advertisement could be placed in a magazine or local newspaper, or in a hotel room or campground.

Try to avoid clutter in the entrance area, and to have clear information on signage which is easily understood by visitors (for example, the word "mezzanine'! may be incomprehensible to many rural people and will confuse them). Creative use of

lighting and large exhibits can help to subtly orient visitors in the right direction.

Adapting a room for a theatre

Often a space never intended to be a theatre must be transformed into one. Several points to keep in mind are:

- block natural lighting, or incorporate it into the design
- ensure there are adequate exits to satisfy safety regulations
- deaden noise from other parts of the building, or from outside
- decide what type of show will be projected and the degree of automation which will be required and install correct electrical circuitry
- determine the function of the room: will it be multi-purpose?
  if there is plenty of wall space, explore the possibilities of mult-imaging or wide screen
- arrange seating and screen for maximum comfort and safety regulations
- pay attention to acoustics and make adjustments as needed

DISCOVERY GALLERY - Lynette Harper

This gallery was specifically designed to encourage "hands-on" participation by the audience, and was aimed at all ages and types of visitors. Labelling is minimal to encourage people to think about the objects, to handle them and to discover for themselves what the article might be used for.

Artifacts specifically designed to appeal to pre-schoolers are displayed physically lower than other ejects and are more toy-like, such as the wooden northern Noah's Ark, a good example of keeping the user in mind.

The comfort factor and informal atmosphere has been achieved by:

- using natural light
- by encouraging people to touch and feel
- by using cubes to sit on instead of tables and chairs
- by random placement of artifacts to add novelty
- by placing toys on the counter which appeal to adults and encourage them to come into the gallery with their children instead of being spectators from the outside
- by use of colour
- by allowing people to move at different speeds through the gallery
- by providing "quiet" areas where people can rest and study an object or the passing scene in more detail
- by having clothing available which people can try on and be photographed in

Another, unexpected, feature of the Discovery Gallery has been the protection of the permanent exhibits in other areas of the museum. For example, the caribou tent used to be on display in the South Gallery and visitors would climb over the barrier to pose for photographs in the tent. Now that they have free access to it in the Discovery Gallery, they stay on the right side of the barriers in the other galleries!

For many northerners, the Heritage Centre is the first museum they have ever visited and they are inclined to touch exhibits in all areas of the museum. The Discovery Gallery acts as a bridge which enables them to touch and feel, before exploring the rest of the museum where handling of exhibits is prohibited.

Observations show that visitors take care of the artifacts in the Discovery Gallery, putting them away in the proper place after use. This is reinforced by using storage boxes with styrofoam inserts designed to take particular artifacts. so long as the Gallery is clean and the storage boxes, cupboards and drawers are freshly painted and not allowed to become scuffed or scratched, visitors are anxious to respect the area and not abuse it. Constant checking is required to ensure that objects are in their correct containers and nothing has been removed.

In designing a gallery like this one, it is essential to know exactly what the goals and objectives are, so that it will work and not be "over designed". The Discovery Gallery took four to six months of consultation with the designer so that function over design was achieved, and not vice versa.

KEEPING THE DOORS OPEN - M. J. Patterson

How to start

The first priority of any group which decides to open an interpretive centre or museum will be to decide WHY such a facility is desired. The group members should brainstorm, compile all the answers and pull together all the ideas.

All available expertise should be pressed into service - during the building of the Angmarlik (Pangnirtung) Interpretive Centre there were six experts regularly involved in reviewing each step of the project. Northern Heritage Centre and Economic Development staff are available to assist local groups in setting up interpretive centres and are very willing to help. The Department of Public Works has architecture and design experts who could be consulted, once ideas and objectives have been developed.

Be sure to consult local people and devise objectives as part of the long term planning.

M. J. stressed the need for continuous communication between the architect, the exhibit designer and the client to ensure that the end product (either in an entirely new building, or in an adapted, existing building) are what the client wants. The client should not feel that he has to accept every recommendation made by the consultants, but should trust his commonsense to achieve the objective he has in mind.

Maintenance

During the planning stages, every last detail should be discussed and agreed upon, right down to issues such as whether pump-out service would be more reliable and cost-effective than utilidor. Ensure the janitorial duties are not overlooked – someone has to be responsible to replace lightbulbs and ensure the washrooms are clean and well-stocked.

Before the facility is officially opened, have several “walk throughs" to ensure that everything

is well-prepared and ready to run as efficiently as possible. Leave nothing to chance - do not assume that "someone else" will do it!

Ensure that the building, furnishings and static exhibits are kept in good repair, repainted when required and cleaned regularly. At the Northern Heritage Centre, the security staff rather than the janitorial staff are responsible for cleaning the display cases, to ensure that no damage is done.

Staffing

Consider the staffing requirements - will training be necessary for the personnel who will run the facility? Will the facility only be open for part of the year? If so, will it be possible to find qualified staff who will be prepared to work on a seasonal basis? Make sure that space is provided in the facility for staff to work comfortably, and if possible include space for large groups for special events.

In a government run facility, staff relations are well-defined, but a non-governmental centre, run by local volunteers or other organization must take care to ensure that the personnel working in the facility know to whom they report, what their pay and benefits package contains, who signs applications for grants and other matters. Staff should be included in all discussions on long range and short range planning and goal setting.

In many museums, all staff, from the top down, are required to work regularly on the reception desk, in order to remain in contact with visitors and discover how the "system" works.

Cost-effectiveness and attention to detail in the initial planning phases will have many long term implications and benefits for the interpretive centre.

INTERPRETIVE PLANNING PITFALLS - David Monteith

David reviewed the stages passed through by the Pangnirtung Interpretive Centre planning team. Initially, the team did not know what they wanted to say and in fact the whole project took twice as long as it should have!

1. At the outset, the team had trouble learning who the client was. Parks Canada had committed half a million dollars but at the eleventh hour had to withdraw from the project due to budget restraint. The whole concept had to return to the drawing board to be scaled down. Do not rely too heavily on funding from one source as repercussions can be costly if that source dries up.

2. Avoid saying too much with too little: design the programme budget to suit your purposes. Relate the storyline to the community so that local people can feel comfortable with it. In Pangnirtung the planners chose to concentrate on the story of whaling as many local people had long family ties to the whaling industry.

3. Experts from across the north were involved, as well as people from southern based libraries, museums, and so on. The first big mistake was in trying to cut corners and tender each step of the project as a separate item. In the end, this approach led to massive confusion and many different people working in isolation who should have been working together. In future, the design and excution of an interpretive centre should be tendered as one complete package, with the onus on the primary consultant to put together a competent team of professionals who will work cooperatively on the project.

4. Make sure the budget is well though out and that every effort is made to adhere to it. When money runs out of one “envelope”, do not take it fron another one without consulting all those invoived whose budget is about to be affected. Make sure there are controls to prevent gaps.

HOW TO MAP THE PROCESS - Michael Murray

The session began with a brief discussion of two terms commonly used in defining the focus of interpretive materials. The first, a "message analysis" is an open-ended exploration of all of the potential ideas and facts which are relevant to the particular subject or location being interpreted. These should eventually be grouped into major classes of ideas and information, according to the principal subjects to be related.

The second stage is the "storyline" which is an attempt to summarize and present in an attractive and provocative way these main ideas. A storyline is essential to the angle or slant you wish to take in organizing the presentation of relevant ideas, experiences or facts. Often a storyline is the major thread which binds the entire centre together. Typically, this central thread is comprised of a variety of distinct but inter-related themes, each developed to tell one aspect of the larger story.

DEFINE THE PURPOSE: decide exactly <u>what</u> is wanted in the new facility - whether it is interpreting certain . . artifacts, a particular species of animal, or a trail.

JUSTIFICATION: decide <u>why</u> the facility is needed.

VISITOR ANALYSIS AND SITE USE: conduct research within the community to discover who visitors are and where they come from (talk to local hotels, airlines and others who have contact with tourists). Build a profile of the "typical" visitor to your community and incorporate the results of the research into the Justification statement.

CONSTRAINTS: examine all the physical and financial constraints that may have an effect on the project (e.g., is there a sensitive archaeological site nearby which ought to be protected?)

LOCATION: decide exactly <u>where</u> the new facility will be situated.

SITE DESCRIPTION: identify any special hazards and deal with them.

SIGNIFICANCE: this is tied into the Justification and Restraint statements; if the area to be interpreted has a great deal of local significance and would be threatened by a stream of visitors, it is worthwhile considering the option of having the interpretation off-site.

ACCESS: determine how people will interact with the exhibit - will it be "hands on" or "do not touch"; if it is an outdoor site, will transportation be required to bring visitors to it, or is it within easy walking distance of hotels or campgrounds?

EXISTING FACILITIES: check thoroughly to ensure that the new facility will not duplicate an already existing one.

OBJECTIVES: decide what it is that you want people to know/feel/do which they did not know/feel/do before visiting the facility.

STORYLINE: the initial drafts can be written in narrative or point form, but it is essential to bring out all the important points which should be included in the exhibit.

BUDGETTING: When drawing up the budget, pay close attention not only to the capital costs, but also to the O. and M. implications and forecast what the recurring O. and M. costs will be, The budget will determine how big a project it will be.

The scale of the project will also determine the experts who will need to be consulted, such as architects, interior designers and others. As the project is planned, note what has to be done and decide to hire or consult the available expertise. It is important to establish a team of core people who will be involved with every stage of the project, and beyond that to have access to other experts who become involved only when needed. Don't forget to build travel costs for consultants into the proposal.

DESIGN APPROACH: talk to designers about colours, form, textures. In making your critical path, decide when the facility will be opened and work backwards to the present, using the following schedule as a guideline:

Terms of Reference
Approval
Draft text
Draft design
Resource package
Mock-up
Pre-test
Final text
Translations
Final design
Site preparation
Typeset
Proof read
Corrections
Proof read
Paste up
Blue prints
Fabricate
Install exhibit
Open for business

Beside each step of the project, write the name of the person responsible for its completion, and the projected date of completion.

Take care to ensure that designers and interpreters work closely with one another, so that the message is not lost in the medium. If the exhibit is slick, in an interesting environment and very colourful, the visitor will be impressed but will learn nothing. It is essential to reduce the story to a few basic messages, and to reproduce it on text which is easy to read and simply worded.

If there is concern about structural limitations of the design, a foam core mockup will allow modifications to be made in advance, thus saving costly alterations.

FINDING THE RIGHT ARTIST: There are a couple of resource catalogues available (see Appendix F) which list artists and the type of work they do. "Networking" is another useful way of finding out who is available and good in their field. If you are unsure which company or individual to hire, run a small competition for minimal dollars and base your decision on the results. When the artist is actually hired, it is important that he or she is aware of what the final medium will be in the exhibit, so work can be adapted accordingly.

Document every step thoroughly, so that in the event it is postponed or cancelled, the paper work will be there in case of a restart in the future.

MATERIALS - Michael Murray

Outdoor signs must be ❑ounted on sturdy, preferably concrete, bases capable of withstanding the elements. They must also be capable of withstanding vandalism - once the first scratched initials have appeared, others will follow rapidly.

ENAMELTEC is the most durable material presently available. Made of similar material to a fridge or stove, it is harder than steel and impossible to scratch. Spray paint wipes off easily. Colours remain true and more than one colour can be used in the texts and illustrations. However, you should work with the manufacturer when determining the design as some colours are hard to reproduce and it is important to know the limitations of the product. Build in several approval steps, and make sure that you have colour samples to ensure the end product is what is envisaged. Enameltec is slightly more expensive than Spectrolite and a good deal more expensive than plywood. (See Appendix E)

SPECTROLITE or DUROLAM: text and illustrations can be silkscreened onto plywood or other base material, photographs pasted on, and then it is covered with fibreglass. This gives the flexibility to use various print forms, drawings and photos, but the resins in the fibreglass will interfere with some inks, so experimentation will be necessary. It is vulnerable to vandalism as it scratches easily, and colours fade when exposed to sunlight over a period of time. If a crack or break appears in the fibreglass, water will seep in and cause irreversible damage. (See Appendix E)

EPOXY FIBREGLASS: This is a good material to use for large models, either indoors or out. It does not fade, is durable and the lifelike effect can be quite dramatic.

Great Slave Graphics, Yellowknife employ a technique of cutting vinyl and glueing it on to a plywood backing. This is faster and cheaper than silkscreening and is more durable for exterior signs.

It was pointed out that animals on signs tend to get shot at, whereas neutral objects such as picnic tables tend to be less of a target. It is important

to bear in mind whether the sign will be attractive for target practice! If the sign is erected at a flatter angle, it is harder to hit.

If the sign is to be only temporary, use less expensive material. Red Deer Signs, Red Deer, Alberta, produces “disposable” signs which are cheap to manufacture in bulk and easily replaced.

Be aware of the environment in the area where the sign will be placed and consider the erosion factors (sand, snow, wind, water etc.) Compare various materials for durability, price before deciding on one particular type. Consider the possibility of seasonal signs which are removed during the winter months.

Indoor signs and display cases should be designed and constructed so they are suitable to their location. If people will be inclined to lean on a display case, ensure it is strong enough to withstand this. Ensure that toe kicks are installed at the base of exhibit cases. Staff may cause damage if they force a door or are careless moving signs around.

Try to use media which will be durable and not require constant repairs, or that is so specialized it requires an expert to fly in from far away to fix it.

AUDIO VISUAL EQUIPMENT: Attached to this document as Appendix F is a list of resource material which will aid planners in finding out who the artists, photographers, filmmakers and others are.

Appendix A

TOURISM AND ARCHAEOLOGY - Chuck Arnold

There is an increasing interest in archaeological sites on the part of tourists, but there are inherent dangers in permitting free access to these sites. The oldest, prehistoric sites are generally obscure and hard to identify by a lay person, but the more recent sites (less than 1,000 years old) are more easily recognized. Degradation of vegetation and exposure of permafrost can set up a chain reaction which is hard to reverse. Looting of whale bone is a continuing problem as well.

The Heritage Centre archaeological staff are available to give assistance on regulations governing archaeological laws, on environmental concerns and on the exposure of archaeological sites. Natural erosion is causing the disappearance of many archaeological sites, particularly along the Mackenzie River.

Northerners have been involved in archaeological work for several years now, and most communities have local people with "hands-on" experience at a dig. Elders have been involved in showing students traditional land use areas and demonstrating the old way of life for tourists.

For every hour spent in the field at an archaeological site, four hours are spent in the laboratory, labelling and examining the specimens retrieved.

The Historical Resources Act is a plaquing programme, commemorating historic sites and heritage buildings throughout the N.W.T.. There is the tension between aboriginal history, preserved through prehistoric artifacts made out of stone, bone or wood, and european history, as portrayed in old buildings which have survived. Careful resolution is needed of the technical problems in preserving these buildings, along with the philosophical problems of highlighting one culture as opposed to another.

The three priorities facing northern archaeologists are:

- how to protect archaeological sites

- how to draw the local community into the sites

- how to work with the tourism industry

The Meliadine River site was mentioned as an example of an area where on-going community involvement is needed. The personal approach of having local guides on-site, instead of using signs telling people to “keep off”, is preferred.

Interpretive Centre planners should build into their budgets funding for training programmed and for brochures and interpretation of the archaeological process. It is important for visitors to recognize that if continued disturbance of archaeological sites is allowed, within ten years the sites will lose their appeal.

Consultant archaeologists are available to work with interpretive centre planners, such as happened in the development of the Kekerton project. Interpretive trails near an archaeological site may be one way of involving visitors while preserving the area near the site. The social local benefits of an archaeological site must also be considered, once again drawing the local community into the project.

Appendix B

USEFUL TELEPHONE NUMBERS

PRINCE OF WALES NORTHERN HERITAGE CENTRE

Director	873-7685
Territorial Archives	873-7698
Librarian	873-7177
Photographer	920-8842
Curator of Collections	873-7668
Conservator	873-7664
Curator of Exhibits	873-7321
Curator of Education	873-7b84
Museums Advisor	873-7244
Senior Archaeologist	920-8839
Toponymic Officer	920-8854

ECONOMIC DEVELOPMENT AND TOURISM

Assistant Deputy Minister	873-7115
Director, Product Development	873-7902
Coordinator, Capital Programs	873-7368
Site Development Specialist	873-7906
Exhibit Design Specialist	(not yet staffed)

APPENDIX C THE AUDIO VISUAL PROGRAMME

The Audio visual Programme

So you have decided to produce an a/v show, you have a budget and you believe you know what the show should cover, so what happens now? As with all media planning and production it-s imperative to establish objectives, from selecting a single image to producing an entire a/v show the same basic planning process is used.

The following is a list of questions to help analyze your requirments for an a/v production. These questions and their answers when written down make up the project proposal.

What are your objectives?

An a/v show has the potential to do three things for your audience; it can increase their knowledge, change their attitude and/or help them develop a new skill. However unless the show is well developed it could instead bore them to tears, misinform or alienate them. So the first thing to decide is "what is the is production going to do for your park?" Will it train employees more effeciently? Will it change attitudes of the public? Will it improve or enhance the parks image? State your objectives as clearly as possible.

An a/v production can do an excellent job of presenting a half dozen major points; If you want to be sure that the audience remembers the information, consider developing additional print materials for the audience to keep.

An a/v show can also be useful in developing new skills such as back-country camping, cross country skiing, canoeing etc.

A/V media can alsobe a powerful tool in persuading people to change their attitudes, but you must take into account these principles if you're going to be successful:

1. No matter how persuasive your message, you aren't likely to change the attitudes of people whose viewpoint is radically different from the one you are proposing. If you're trying to develop support for your case, you'll get better results if you design the show to mobilize people already sympathetic to your viewpoint instead of designing it to convert your opponents.

2. You-re more likely to influence people about an issue if they have no prior opinion on the subject.

3. If audience members are trying to make up their minds about an issue, present your side as well as the arguements of the opposing view. By presenting 'both sides of an issue, you innoculate your audience against the persuasive power of your opponents .

4. When trying to persuade a hostile audience to see your point of view, start by pointing out those issues on which you both agree. Having demonstated common ground, the audience should be more receptive to your position.

5. Don´t rely on your show alone to persuade the audience

6. Don´t try to intimidate your audience into accepting your petit of view, chances are they´ll dismiss you entirely.

7. If the message in your production is presented by a credible speaker your presentation may have more * c t .

8. Provide your audience with suggestions of concrete action, let them know exactly what you want then to do or feel.

Who is the audience?

Who are they and what what are they looking for or expecting from this presentation?

Try to deterndne the factors that will make them listen and understand your message. Think of the audience as one person with specific questions and concerns, make the listeners feel that the communication is aimed at them.

Where the target audience is not well known, it is still wise to try and find out as much as possible about them. Do they know much shut the subject? What are their educational and occupational levels? What are the age levels of the group? Is there an attitude towards the subject or possibly towards the park ? Does the group have a predominant discriminatory attitude?

Never underes timate the intelligence of your audience . People are mos t likely to learn when the message is relevent to their current needs.

What content should the show rover?

If you're not already familiar with the subject to be covered by the production, consult someone who is. List the six or eight main points to be covered, explain each point in as much detail as poss ible, and explain how this content will help achieve the intended objectives. Initial research should provide enough information to deterinine whether the subject is suitable for a a/v presentation.

How will the show be presented?

1. What playback equipment is available'?

2. What type of facility will be used to screen the s how?

3. Who will run the show?

4. What other activities will take place at the time the show 1s aired?

5. Who will be responsible for the condition of the show?

6. Is a video transfer wanted at a later date?

What resources are available to produce the show ?

Is the show to be produced at the park, regional office or by outside contractor? What budget is available to do the show. Remember you get what you pay for. Rather than asking a producer how much a show will cost, you should tell. them how much you are willing to spend. objectives can help determine what a show is worth.

First rate productions can be made if enough time is available and the time used effectively and ef f icently. Generally the smiler the budget the longer the time required to develop a good quality show.

Can an existing show be used?

Parks often embark on a production without checking to see if the show they want has already been produced. If you decide an original production is required, a look at similar productions can provide a wealth of good ideas and suggest areas to avoid.

Do you plan to sell or rent copies to the public?

Sometimes after a slide show has been produced interest is expressed in having video tape copies or audio cassettes made of the show. This information should b e identified early as it may affect cost and copyright coverage of the original production.

Who will review and approve the show?

Who has the final authority to approve your production? Identify everyone who has to approve it and in determining that, don-t just think of senior administratrators. Ask for suggestions from those staff who will actually present the show.

Consider having the production reviewed by someone outside vour organization not directly involved in the production of the show. Usually you are too familiar with the content to be a realistic judge of it's effectiveness. Even other staff members may be prevented from evaluating the show realistically because they know too much shut the subject or they don-t want offend you. Try to think of how the public will recieve your efforts.

If the production deals with controversial Subject matter, or is designed to convey critical information the audience has to remember, you may want to have the initial proposal, the script, and the show itself reviewed by a sample group of the people you have identified as the audience.

Although you should have the production reviewed, getting approval from people can be a very time consuming process. To simplify rotters have your reviewers meet as a group and limit the size of the group to five or six people.

How will you select or brief the approval committee?

Although you should have the production reviewed, getting approval from people can be a very time consuming process. To simplify rotters have your reviewers meet as a group and limit the size of the group to five or six people.

Select people who can give you the most assistance; people who know something about a/v media, who work well in groups, and have previous experience as reviewers. The more committee members understand about the process of production, the more they´ll be able to help you and they will also be less likely to make unreasonable demands. Make sure they understand what´s expected of them.

In the early stages of a show´s development, you can revise your ideas subs tantially. As work progresses, major revisions cannot be made without incurring considerable cost. If some of your reviewers think that the show should be produced on video ins tead of s lide rope, they should sav so right at the beginning . If someone wants to change words in the script, the time to do so is BEFORE you've 'hired a narrator and recorded the sound track.

How long will the show be used before replacing or updating it?

Depending upon the complexity of a production, workloads and budgets, an a/v production may take a couple of months to several years to complete. Shows intended for VRC, s may have a life of 5-10 vears, others may only be used for a season perhaps even a few days. Don´t wait until an existing show is tired and unfit for public showing. Start your planning early.

The proposal

"Putting ideas into words"

Once you have determined and written down your objectives, the process of gathering together all the salient facts begins. A project proposal should be prepared, this is usually a one or two page creative document used to summarize everything known about the requirements and resources, including the objectives, intended audience, content to be covered, distribution plans, budget and other resources, deadline, and who is responsible for approving the production. Whether the show is produced by contractor, or in-house a project proposal should be prepared. The plan helps form realistic objectives and establishes plans for production. The proposal can later be used as part of your terms of reference and in the evaluation process as a baseline.

The reference package

A proposal should include a reference package. Begin gathering reference material; photos, illustrations, books, articles, etc. - just about anything that covers your subject. These materials should give you a general understanding of the subject, some specific facts and may also help you "picture" the subject you're researching. Remember: WHO, WHAT, WHERE, WHY, WHEN AND HOW.

Once you've looked over all the reference material and have a basic understanding of the subject, talk to those people who can provide more detailed information. When you conduct interviews, collect useful phrases that can be used when you write the script. People like to be interviewed, and once the questions have begun, few people are clock watchers. If you have to interview several people on the same topic, speak to each person separately. You're likely to receive more candid answers. Begin with easily answered questions, this will help establish the support needed to obtain candid answers to the tough questions you're saving for last. Unless your subjects need time to research specific topics, don't submit questions ahead of time or you'll take the spontaneity out of their answers. Keep your questions short and listen carefully to what your subject is saying.

Once familiar with your subject, get out and have a look at it. Visit the sites where the show will be shot, observe the people and the operations covered by the show. If you are not to be the show's producer convey this information in detail to the person who will be. Better still, take them with you on location.

While gathering facts, gather visual impressions and make notes about the ideas you want to convey. These visual impressions of your subject are more important than the verbal because an audiovisual presentation is predominately a visual medium. In addition to the notes shut the visuals, take some shots of the locations you might use in the presentation. These slides will be useful when planning the visual part of the script. If you plan to turn the shooting over to a photographer, the slides you shoot in the research phase of the production will assist in planning the visuals and an efficient stategy for shooting the production.

APPENDIX D

VISITOR RECEPTION AREA and STEPS IN DEVELOPING AN EXHIBIT

PLANNING - "HOW TO TELL THE STORY"

PRELIMINARY TERMS OF REFERENCE

A preliminary terms of reference should be prepared outlining the scope of the project, identifying the project team, defining the project objectives and establishing a tentative schedule.

IDENTIFY TEAM

Because of the nature of the V.R.C.'s most team members will come from Interpretation and Engineering and Architecture and will include the following: a designer, a writer, park officer, project architect, landscape architect, interpretation specialist and any subject matter specialist who might be required.

REVISIONS TO T. OF R.

Once the team has been committed and consulted, the terms of reference are revised to reflect schedule changes, task and responsibility definition, and identification of associated planning costs, etc.

PREPARE DATA BRIEF

Next, it will be necessary to develop a storyline and define the audience. The necessary research and data collection will have preceeded this step and a data brief will have been prepared for the benefit of the team.

APPROACHES SESSION

An approaches session or "think tank" is held to determine the best "approach" to telling the story and to identify the gross space requirements and proposed traffic flow of the building and site.

SITE REQUIREMENTS

A good site should meet the following criteria:

1. It should be assured of heavy use.
2. It should be relatively close to services such as power, water, road access.
3. The site should also include desirable aesthetic conditions.

SPACE REQUIREMENTS

Space requirements are developed by determining the numbers of the anticipated average audience load from the data available and calculating the anticipated number of

visitors per hour in the building. According to a paper issued by the Denver Service Centre (USNPS 1974) the following average can be applied to calculate gross space requirements.

1. Lobby -1.1 m2/person
2. Theatres/Assembly rooms -1 sq. m/person
3. Exhibit Areas -1.8 m^2/person
4. Lounge/Rest Areas - 1.8 m^2/person

FLOW DIAGRAM

These space requirements can then be used to show a flow diagram (or bubble diagram) which indicates the desired visitor flow from one area to another, and how the areas should related to one another. It can also indicate the desired approach to the centre and features of the site - e.g. orientation to views, proposed boardwalks or trailheads, etc. Other space require.ments such as offices, washrooms, furnace room, etc. can be estimated by consulting with the project architect. Any special requirements such as environmental controls (temp., humidity, etc.) should be stated.

PREPARE REPORT

OBTAIN APPROVAL-IN-PRINCIPAL FOR FACILITY

From these gross estimates it will be possible to prepare class 'C" estimates for the proposed facility and for the associated exhibits and A/V requirements. All this information - flow diagrams, space requirements, money estimates, etc. are then combined into a report which is submitted, with an accompanying PIP, to the park superintendent for approval. After receiving park approval, it is subsequently submitted for approval by Region and then Ottawa.

PREPARE MEDIA PACKAGE

After the architect has been selected, a media package will be prepard either in concert with the design architect (the ideal) or working with the architect's preliminary designs. Media package development will generally follow the procedures described in Level 4 - PLANNING.

Every member of the team should review all stages of media package development and building design. A class "C" estimate should result from this and the necessary revisions should be made to the PIP. The media package is then submitted to the park for approval.

OBTAIN FINAL APPROVAL

After receiving park approval, the media package is forwarded to region for review by Engineering and Architecture and approval by the Regional Director. It is then combined with the building design submission and sent to Ottawa for approval to proceed with Construction.

IMPLEMENTATION - "TELLING THE STORY"

PREPARE TERMS OF REFERENCE

CONTRACT FINAL DESIGN

PROVIDE SUPERVISION

After obtaining final approval for the project, a terms of reference is prepared to assist the Canadian Government Expositions Centre in contracting for final exhibit design. (See Level 5A - Planning, for details). With a project of this size, it is usually not practical for Parks Canada staff to undertake the final design themselves. Previous experience has led us to hire a term designer to provide full-time supervision for the design development of the project.

INITIATE CONTRACTS

Once the final design is complete contracts can be initiated through CG EC for fabrication and installation.

INSTALL AND SIGN-OFF

After fabrication, the designer will co-ordinate and supervise the installation of the exhibits and sign off the project to the park via a product acceptance form. Personnel from Historic Resource Conservation will install artifacts or period furnishings.

EVALUATION - "IS ANYONE LISTENING?"

VRC CHECK LET

As with other media, a Level 1 checklist evaluation should be done, once the centre is open and operating. All the components should

be complete and in place, or, the evaluation will lack credibility. The building design and its environment may also be included as part of the exercise.

MEASURE
PUBLIC RESPONSE

At the same time, attendants should record the numbers of visitors and any public comment or response. This information along with the checklist report can then be used to determine if any minor revisions are necessary, or if a level II, III or IV assessment if required.

MANAGEMENT
DIRECTIVE 2.1.2

If a project costs $100,000 or more, according to this management directive, a post-review of the capital construction will occur. This is a two-phased process conducted by programming. Phase one occurs at the time the superintendent assumes management of the project, and phase two occurs one year after the project has been in operation. The need for this level of assessment will be determined by senior management.

(5)

STEPS INVOLVED IN DEVELOPING AN EXHIBIT

1985.

KEY ACTIVITIES

1 APPROVED PLAN

2 INFORMATION PACKAGE (PREPARED BY PARK)

3 REVIEW (TECHNICAL & COMPLETENESS)

4 FINAL INFORMATION PACKAGE

5 TEAM MEETING

6 MEDIA PACKAGE (CONCEPTUAL DRAWINGS BY MEDIA

7 MEDIA PACKAGE APPROVAL

8 FUNDING/PROGRAMMING

9 SCHEDULING

10 ADDITIONAL RESEARCH FOR PARTICULARS

11 WRITING (BY PARK OR MEDIA OR BY CONT

12 EDITING

13 APPROVALS

14 TRANSLATION

15 FINAL TEXT

16 DESIGN DETAILING BY DESIGNER

17 WORKING DRAWINGS

18 SPECIFICATIONS

19 SITE DEVELOPMENT DRAWINGS (E+A)

20 APPROVALS

21 SITE WORK CONTACTING

22 CAMERA READY ARTWORK BY DESIGNER (OR CONTRACT)

COPY FITTING & MARK UP

TYPESETTING

PROOFREADING

GRAPHIC ART

ILLUSTRATIONS

COLOR SCHEDULE

23 FILMWORK

24 SPECIFICATIONS OF FINISHES

25 PRODUCTION MEETING (DESIGNER & CONTRACTOR)

26 CONTRACT DOCUMENTS

27 TENDERING PROCEDURES

28 FIRM PRICE LETTER OF OFFER

29 AWARDING OF TENDERS

30 FABRICATION OF COMPONENTS

31 APPROVALS

32 DELIVERY

D 33 INSTALLATION (SUPERVISED BY DESIGNER)

34 INSTALLATION REPORT

35 PRODUCT ACCEPTANCE

APPENDIX E ENAMELTEC FACT SHEET and KALESKI ON SIGNS

ENAMELTEC

FACT SHEET

INTERNATIONAL REPRESENTATIVES FOR ENAMELTEC

Dean Follis
2124 West Venice Blvd.
Los Angeles, CA 90006
Phone 213-735.1283
FAX 213-730-1334

1. THE PROCESS Enameltec, also known as porcelain enamel, is fused (or fired) onto special steel at 1500 degrees Fahrenheit and has a glass-like finish which is normally a rich, deep gloss, but is also available in any degree of gloss to full matte.

2. LIFE Enameltec colors have an exceptionally tong life with a minimum of fading. Fifty year color stability in direct sunlight is not uncommon.

3. GUARANTEE Enameltec panels are guaranteed for fifteen years anywhere, even near the seaside or in acid rain environments.

4. PRODUCTION TIME Fabrication time is four weeks after client approval of project

5. COLOR Enameltec has a library of 2,500 stock colors and will match to client samples. All PMS colors except the following can be ordered:

These cannelbe reproduced:

203	210	213	219	225	232	239	246	252
204	211	217	223	226	233	240	247	253
205	212	218	224	231	238	245	248	254

Approximation of these PMS colors are attainable:

182	184	190	196	198	241	256
183	189	191	197	230	243	257

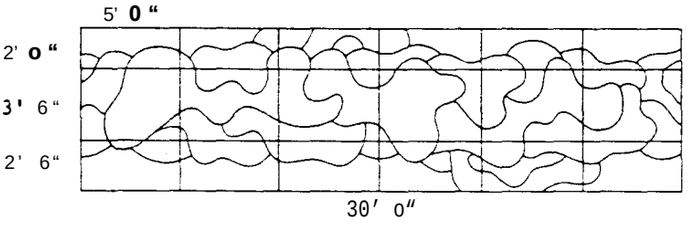
6. GOLD FINISH Can be screened on anydesign or background. 23 karat gold is used and gives asmooth high permanent gloss.

7. BLACK AND WHITE Photographs, illustrations and fine art can be reproduced in any effect screen Up to 133 lines per inch, then fused as an integral part of the finished panel.

8. PROCESS COLOR Four color photographs" andillustrations can be reproduced in porcelain in desired dot patterns from 101065 lines per inch. once fused the glass colors become an integral parl of the Enameltec panel.

9. PANEL SIZE Maximum size Is, 72" x 48" with or without flanges (return edges), minimum size is 1 square or 1 diameter.

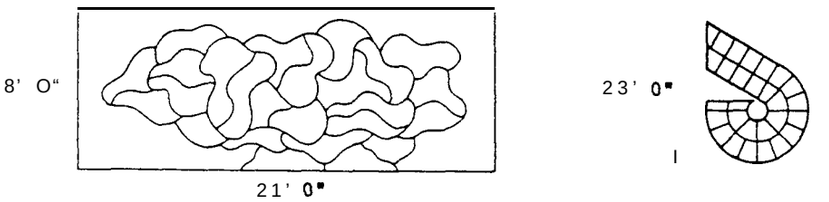
10 LARGER SIZES For murals, art pieces, signs, etc., or that exceed 72 x 48", can be achieved by ganging as shown in these diagram panels. Continuous art can be produced that runs over panels.



11. FLANGE SIZE Maximum 4 deep, minimum, 3/6' deep. Panels can also be ordered flat (without flanges),

12. EDGES AND CORNERS All flanged panels have radius edges and cornersof316". Larger custom edge radii can be obtained for an additional charge.

13. IRREGULAR SHAPES Can also be fabricated with or without flanges. Shown below are two examples of ganged panels making larger shapes.



14. SCULPTURED SHAPES Can be formed in cast iron and then enamelized. Similarly, sheet metal forms can be sculpted and enamelized.

15. GENERAL INSTALLATION Panels can be attached to a wall or mounting surface by expansion sleeves or vandal proof fasteners. Permanent installation of the panel to applied backing board is possible with the use of silicone adhesive. Semi-permanent mounting to backing is possible through the use of double-sided foam tape or specialty hardware.

16. ATTACHMENT HOLES And other openings in the panel must be made prior to firing.

17. CLIPS AND THREADED STUDS Can be permanently affixed to back of panels for attachment purposes.

18. EXTERIOR MOUNTING High density foam or 40year plywood is used as an installation backer or mounting panel outdoors.

19. INTERIOR MOUNTING Common plywood or high density foam, depending on preferred installation method.

20. ORDERING Background color must be stated but is not included as a chargeable color. A panel with a green background and three additional screen (or image) colors will be priced as a three mlor job.

21. ESTIMATES Can be obtained by specifying panel size, shape, flange size and number of screen colors, photographs and illustration sizes.

22. FINAL QUOTATION When camera-ready art is received or tight comprehensive drawings and specifications are provided, a final quotation will be presented within 24 hours,

23. VOLUME DISCOUNTS Unit costs drop dramatically when panels of same size and/or artwork are produced in quantity

24, DEPOSIT Since all of these panels are custom designed, we require a 50% deposit on all orders with the balance due on delivery

25. J 5 YEAR GUARANTEE Enameltec will replace - free of production charge - any of its signage that discolors, chips, oxidizes, fades or scales for any reason (except vandalism, accidental impact or improper installation). Extended and customized warranties are available from Enameltec.

26. REPLACEMENT DISCOUNTS Enameltec will replace any of its signage that is damaged tor any reason (with the exception of improper installation), at the following schedule: Within the first 12 months at 65% of original invoiced cost; 13 to 36 months - al 75% of original invoiced cost; 85% of original invoiced cost. Damage must be documented by a CLEAR photograph of affectation, and accompanied with a the original invoice, engineering specifications and artwork. Replacement will be produced promptly

For items 25 and 26, these policies are valid for all contracts in 1988

KALESKI ON SIGNS

By Cliff Kaleski

Another popular **material for signage are the fibreglass resin encapsulated products. They are worth considering.**

Briefly the process is that a layer of transparent fibreglass resin is laid down in a mould A single-sided piece of art-work a drawing or a photograph or other image is laid on the layer of resin. The two materials bond into one. A second transparent layer is put on top A thin sheet of fibreglass is then bonded to the whole

Personally I prefer not to bond the backing to the sign itself I would use contact cement or another similar adhesive to bond the encapsulated product to the backing A frame around the outside keeps water from getting in between the two products It also makes it look a little neater.

Some companies are experimenting with plywood and core boards as backings which are bonded to these materials The unit is then one solid piece The maximum thickness of the resin layers is determined by the exothermic curing process of the resins. Advice on this will be given by the producers

If the layers are produced too thickly the layers might tend to expand and contract at different rates and there is a danger of delamination

For the relatively low cost this method produces some fabulous products It currently runs about CDN$10 per square foot. It is the ideal material for a throw-away sign one with an expected lifespan of six months to a year

A good application of this material is in an area prone to vandalism The artwork for the sign should be done as a photographic print The print is then encapsulated in the resin and the sign mounted. The cost is low so when the sign is vandalised it is then replaced with another identical sign made in the original run

A porcelain enamel version of the same sign will cost up to ten times as much as an encapsulated resin sign The savings in this type of situation are obvious

As a material for interior signs it is may be the most cost-effective, especially in areas where they are likely to be touched or handled

One drawback is a process of delamination in which the original bonded layers begin to separate It can also delaminate from plywood backings if the backing material has not been properly treated Open edged plywood need special treatment to keep water from entering the layers. A marine grade would be the minimum to specify especially if the sign is outside in climatic extremes Some sealants break down in the sun or in the cold and will eventually admit moisture

This material seems to be highly susceptible 10 UV fadeout Even after only a year some colours such as reds and yellows will disappear Colour photographs seem especially susceptible

Minor scratches can be polished off with a buffing compound

Any impacts on the surface can easily crack the surface and cause a small craze or opening Moisture and even microscopic growths can enter and cause the layers to delaminate Before you know it the chip has spread into a large area of discolora-tion. Eventually the artwork discolours or deteriorates to the point where it must be replaced

I think it might be possible 10 repair these small chips with a sealant but I don't have any direct experience with doing that Perhaps some of our readers can advise on their experience. These materials might also cause a defraction of the light and be a visual distraction to viewers.

Any sign is susceptible to vandalism and they all have a lifespan It is essential that the sign program have a replacement or retirement schedule built into the planning process no matter how reliable you have been told the product is.

PORCELAIN & VITREOUS ENAMEL SIGNS

by Cliff Kaleski

Fire-proof, fade-proof and almost vandal-proof, an old technique for producing signs has made a colourful come-back in North America

The porcelain or vitreous enamel on steel technique is more than a hundred years old. It was used in the past for making signs and was also used, in decorative and purely practical contexts, on pails, basins and eating utensils. More recently it has been used widely in industry, for stove tops and pots and pans. Over the past five or six years, revitalized by modern processes that make it possible to obtain a wide range of colours, it has again become a common material for long-lasting, all-weather signs.

Glass is ground up into a very fine "frit" about the consistency of flour. This is mixed with water and brushed or sprayed onto a steel base. The water evaporates leaving the powder coating the metal. The metal is prepared by an acid etching to make its surface more likely to bond with the frit. This coated plate is then fired in a kiln at high temperatures where the glass beads melt and bond together over the metal in an even glass surface.

The neutral-coloured glass frit is tinted by the addition of frit pigments in any shade or hue much in the same way that paint is coloured. Some colours are more difficult to create or mix than others but the technology is developing quickly and technical difficulties are being overcome.

Simple signs are easy to produce but the technology can also meet more sophisticated demands. Anything that can be done in a standard silk-screened plywood sign can be duplicated in vitreous enamel. The frit can be silk-screened onto the sign, and even work from four-colour process photographic separations can be produced. "UV fade" and fugitive colours seem not to be a problem with enamel colours, even the reds and yellows seem to stand up well. Metals can be added to the frit to create exotic metallic finishes too.

Not all companies produce first-rate results. Some have difficulties with some of the silk-screening processes.. The more colours used, the more difficulties are encountered. For example the eighth colour added and fired may begin to cause problems in the previous seven colours.

The size of the sign is limited only by the size of the company's kiln. Generally the companies will charge a rate by the square foot, so the cost rises with size and the number of times the sign must be fired.

The base used almost exclusively at the moment is a special quality of enameling steel. The sheet is either used alone as a sign or it is shaped into a flange-form which will usually accommodate a backing. The backing is usually a high quality marine grade plywood but a spray foam material is sometimes used.

One of the drawbacks of vitreous enamel is that, if the steel sheet flexes, it will damage the bonding of the enamel so that it become prone to later deterioration. The larger the sign the more likely it is to be stressed in this way. However, once it is installed properly it is probably one of the toughest sign materials available. If it is installed incorrectly it is a waste of money.

The most frequent problem I have seen is that the sign will be mounted with a flange covering a one inch piece of plywood with nothing between the plywood and the metal surface. When it is mounted there is a certain amount of space between the two materials. Any pressure or sharp blow hitting that point, a stone or vandal's axe, will cause the metal to flex and fracture the finish. Great care has to be taken to ensure that it doesn't flex.

As a response, installers will apply silicone seal to the back of the sign and press the plywood against it so that when the silicone cures it bonds to the plywood and creates one solid permanent unit.

The problem with this approach is that if a change is ever required it is virtually impossible to separate the sign from the plywood. There is a trick though which solves this dilemma. When the sign is originally being bonded to the plywood, spray a layer of insulation and lay a length of piano wire around the edge of the sign. Leave a tiny gap in the outer dimensions of the plywood backing. If there is ever trouble you can use the length of piano wire to sever the bonding of the insulation thus freeing the two pieces, just as a wire cheese slicer cuts cheese.

If vandals are determined, they can damage the sign but it is more resistant than other materials. A hardened steel knife will leave a scratch. Keys usually do not scratch but leave a metal residue on the sign which can be easily buffed off. A severe scratch can be repaired by returning the sign to the manufacturer to be refired. The molten enamel will fill in the scratch but there will be a side effect in that the definition of all the images will be slightly diminished.

So that backings don't break down they should be appropriate to the conditions in which they will be used. The edges of plywood must be treated with silicone or by applying a metal cladding. Any pressure-treated wood will be adequate but high quality marine plywood will be the best.

Plastic board, foam-core materials, have incrediblestrength and little weight One company is considering producing a vitreous enamel so thin thatit could be bonded to a plastic material or core board so that die-cut letters could be produced. In situations where texts change frequently this couldbe a real breakthrough.

If a small error is found in the sign, or a small change is required later, there is an opportunity to make the change at a later date by replacing the letting or image by hand and refiring. Even damage from a gunshot can be repaired in the same manner.

Enamel will cope with the majority of standard vandal tools and techniques. Spray paint will easily wipe off with a solvent. This can actually be used to advantage by a manager who knows in advance that a sign will have to be changed sometimein the future. A sign with an **empty spot in** the background can be silk-screened with conventional paints so that it can be removed or replaced later. This is a useful means of accommodating temporary (e.g. "opening soon") or seasonal information.

in areas where grass or forest fires are a possible hazard, installations are mounted on a steel mounight is virtually immune to the heat and flames.

A tamper-proof nut systemwill make signs very difficult to steal but if the sign is to be placed in **an area of recurring vandalism i would not advise the use of enamel.** The cost simply wouldn't warrant its application. in such **situations you might as well go for a "disposable"** sign in another material and replace it when necessary.

in areas where installation costs are high, where a permanent sign is desirable, vitreous enamel signs will last more than fifty years. i have recovered signs which were erected in national parks in Western Canada **fifty years** ago which are as bright today as the day they were erected. They were nailed to a tree and the tree grew around them causing them to buckle around the nail holes but otherwise they looked great! Some others of equal age on the Pacific coast, bombarded continuallyby salt air and sand, were equally well preserved.

Costs vary from supplier to supplier. The new silk-screening techniques have brought the cost down. It is considered the "growth" industry in signs. With competition now in the field customers should shop around for the best competitive rates. There are now two vitreous enamel sign companies in Western Canada, at least two in Ontario and several in Seattle, Washington. ❐

DEFINITIONS

Texas Parks and Wildlife Department
Although the Department does not provide a specific definition of interpretationit has a well-established interpretive planning program with experienced staff who stay current current on developments in the field of interpretation. As stated in our Six year Program Plan, one of the goals of the Parks Divisionis "to provide thepublicwith Informative and educational experiences in the state parks throughthe development and management of interpretive programsthat contribute to the preservation and conservationof the natural and historical resources of tneState of Texas. " ❐

Massachusetts Division of Forests and Parks
Interpretation is an educational activitythatrelates and reveals to visitors in an appealing and provocative manner the natural, cultural, resource management, and recreationalfeatures of a forest and park site, thereby increasing visitors' enjoyment of and appreciation for the site. O

Pennsylvania Bureau of State Parks
Environmental education is a learning process concerned with the interrelationships among components of the natural and human-made world producing growth in the individual and leading to responsible stewardship of the earth " ❐

William E. Brown (in Island of Hope. Washington, D.C. NRPA. 1971.)
Environmentalinterpretationis that body of communications, devices and facilities that conveys environmental reform. ❐

John **Lunn,** Edmonton, Alberta, Canada
Interpretation is the art of communicating ideas through environmental exposure, experiential techniques and media enhancement. Effective interpretation will be planned, developed and presented with such sensitivity and skill that those encountering it will perceive the experience not only as rewarding and memorable, but often as self-generated.

Whatever the topic or audience, the best interpretation should stimulate further inquiry into the human condition, inculcate a respect for the interdependenceoflife on this planet, and improveunderstanding of the seminalrole of human culture inthe maintenance of a balanced global environment. It is among the highest forms of educative communication to which we may aspire. Concomitantly, by virtue ofthe diversity of those with whom we wouldcommunicate, itis one of the most difficultarts to practice effectively. ❐

Appendix F

BIBLIOGRAPHY

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"Projection Calculator and Seating Guide"
published by Kodak Camera

"Creative Source"
published by Wilcord Publications,
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