



The Liturgy, The Data Projector, And You

By Fr Clem Hill MTh

Contents

A word of introduction	3
Chapter 1: The Liturgy, the Data Projector, and You	4
Chapter 2: A new age of audiovisual communication	6
Chapter 3: An overview of the data projector’s work	7
Chapter 4: A worst case scenario?	11
Chapter 5: Your responsibility regarding copyright	12
Chapter 6: Preparing your PowerPoint slides	13
Chapter 7: An exercise in the use of text & image	15
Chapter 8: Using the Data Projector in your parish: A brief survey of what is required	17

A word of introduction

What an age of extraordinary technological progress this is! The art of communicating has certainly taken a quantum leap in our day and age. And new technology, like for example the data projector, is opening up new horizons. Many parishes and most schools now use this method of presentation especially within the celebration of the Mass. But there's often a thin line between sparking a person's wholehearted involvement and of creating an atmosphere of entertainment. And for all kinds of reasons, entertainment cancels out what the Liturgy is aiming to do!

This short exploration into the world of the data projector aims to make the best use of this technology but in a "liturgical" way. Both preparing the programmes and operating the data projector in the course of the Mass is performing a real service to the gathered Church, a true ministry. We hope that this brief work makes this as clear as crystal.

This is a work of the Diocesan Liturgy Commission, Diocese of Broken Bay NSW, Australia. Special thanks to Margot Beckett and Eileen Luthi for their timely advice. In particular, I wish to acknowledge the assistance of Matthew Donovan of Clare Communications Co. Pty Ltd. who provided valuable input for the technical section.

Fr Clem Hill MTh
December 2008

Chapter 1

The Liturgy, the Data Projector, and You

The data projector is (or can be) a wonderful tool in helping people to participate actively and consciously in a liturgical celebration. But it is only a tool, a help, and not an end in itself. If it takes on too dominant a role it could just as easily become a way of entertaining the masses instead of being a guide to entering into the Mass.

First, get your perspective on the Liturgy right

Before you can make a successful plunge into the world of Liturgy and data projecting, you have to first get your ideas straight on some key principles.

The Liturgy is the place where **the Word** reigns supreme. But when we say “the Word” we mean a **person**, Jesus the Son of God. The Mass, the Liturgy of the Eucharist, is that unique gathering in which Jesus, the Word of God, reveals himself to you by various means and gives you the ability to respond deep down to him. This person Jesus, whom we understand as God’s **Word**, continues this dialogue with you right through the Mass, from start to finish.

In this stream of communication between Jesus and yourself there are certain high points:

The Readings

We call this the **Liturgy of the Word**, but we don’t mean that this is the only time that the Word sends out his message. It is a time when the words of the readings, and the word-pictures they give rise to, need to be heard clearly and distinctly, in a way that will make them come **alive** with meaning. It’s not just the words themselves but the Person who is communicating through them! So nothing should distract you from letting these words do their job.

The Eucharistic Prayer

After preparing the Gifts of bread and wine, the time is come for the greatest prayer of all, **the Eucharistic Prayer**. This is where Jesus, the living Word of God, reveals the very heart of God in the deepest way we know. This central Prayer has three interconnected phases: Firstly, Christ draws us into praise and blessing of God, something we could not do on our own. Secondly, we touch the very heart of what happened on the Cross and enter the meaning and reality of Jesus’ Body and Blood, given for us. Thirdly, we call on the Holy Spirit to make all of this come alive in us and in our community, the Church.

Even though the words of the Eucharistic Prayer are spoken by the priest alone, the prayer belongs to **you**. The priest’s task is to make it touch you, and involve you, and draw you in. And for the individual person, this is a time of very personal engagement and nothing should take your attention away!

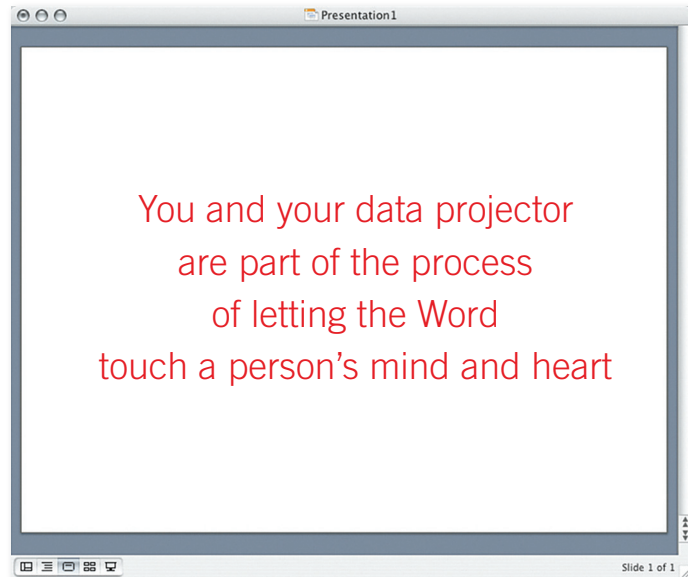
Holy Communion

After the Eucharistic Prayer, the communication by Christ the Word of God continues in different ways. It becomes a kind of consciousness-raising. We have to be more acclimatized or attuned to recognize the presence of Jesus before we approach the Sacrament. As St Paul said, we have to “recognize the body” which means Christ present in his own community, the Church (*cf I Cor 11, 13*). This leads us deeper into recognizing Jesus truly present in Holy Communion, his true Body and Blood. Again, nothing should distract us from this inner discovery.

So, everything about the Mass is built around **the prime experience of meeting Christ** and personally connecting with him. And this is not restricted to the time of actually receiving Holy

Communion. Instead it is a **process**, a build-up of the whole experience in different ways. It begins when we gather and recognize ourselves as the Church at prayer. It continues on as Christ opens the Scriptures for us and reveals the face of God. It intensifies as Jesus empowers us to enter more deeply into the divine presence in the Eucharistic Prayer. Then it leads into the most personal act of receiving Holy Communion. And finally it concludes with our being sent out to take the grace of Eucharist and the power of the Word to change our world into a better place.

That's what the Mass is about.



Chapter 2

A new age of *audiovisual* communication

A new age of *audiovisual* communication

Today we live in a new age of communication. We connect through a modern “*language*” of words, images, light and sound, colour and atmosphere. We need to be engaged as a *whole person*, not just our intellect. We expect to be communicated to in ways that are personal (not impersonal, or as just one of a crowd). You and I demand to have a real part in the business of communicating, to be *communicated with*, not “*spoken at*”. We want to be able to imagine and feel what’s being communicated, which really means we want the choice of making it *our own*.

Today’s Liturgy must speak to the *audiovisual* person

The way we are meant to celebrate Liturgy today comes out of our strong conviction of the importance of communicating. We know we have to engage the person actively and consciously in the responding to God’s Word and the divine presence. But this means involving the *whole person*. That’s why, as priests and readers, we are now more conscious not only of *what* we say but *how* we say it. And we try to get people’s imagination going by a more skillful use of colour, and lighting, and artistic images and architectural setting, and we wrap people up in sound. And this, of course is where the *data projector* comes in. Not only this piece of electronic equipment itself but the one who uses it as a way of communicating. You yourself.

Knowing how a person ticks

You, as programmer of the data projector, are by definition a *communicator*. But a communicator has to know how the person on the receiving end ticks. That’s why I’m not talking about reaching out to crowds of people. That’s too impersonal. Instead, we have to think in terms of the *individual person*. What’s going to help that person understand, feel part of, be encouraged to join in, to know how to respond to a clear message? At the same time, what’s going to make things difficult for that person, create a distraction, overload the brain and the imagination, too much to take on board? Being sensitive to these things is the communicator’s special responsibility.

Appreciating a person’s attention focus

Today a person can hardly resist looking at a screen. Even when a TV is turned off, people coming into a room will automatically lock on to it! Screens can dominate our lives: TV screens, movie screens, computer screens, even little mobile phone screens. In a church a screen can have a dominating effect and we have to be careful that people don’t look at it for entertainment. Moving images, of course, are irresistible. This automatic response of the eye to movement is something bred into us from primordial times. It’s how we’re made and we can’t help it. Appreciating this will help you know what to project, and when, and how.

Appreciating the Liturgy’s lines of focus

Within the celebration of Mass, there are clear lines of focus which help the person understand what’s going on and engage with it. The church is set out so that our attention is captured by certain visual focal points: the *altar* and what’s happening on it and around it, the *ambo* (lectern) and what’s being proclaimed from it, the priest’s *chair* and the communal prayer that’s being led from it. It is so important that the projector screen (and what happens on it) does not compete with these key attention points or drag attention away, especially at the peak times of the Mass.

As well as these *visual* lines of focus, there are *times* of deep *interior focus*, when it is vital that the person not be distracted by outside things in any way. We detailed these peak times earlier on, in our explanation of what goes on at Mass. So then, the data projector should never be used during these times – during the readings themselves, during the praying of the Eucharistic Prayer, or during the lead-up to Holy Communion. These are the most sacred times and nothing should distract from them.

Chapter 3

An overview of the data projector's work

An overview of the data projector's work

Now that we have looked at what happens in the Mass, we can begin to explore how we can make the best use of the data projector in assisting each person to be part of the whole liturgical experience. Let's see what kind of things we need to use on screen, and their general order of importance.

Words & Texts

1. Mass texts on screen so that people can easily join in

- **Words of the Mass:** especially prayers that people are not so familiar with. This will soon be most necessary when we have many new and different texts of the Mass to learn. But never put the readings on the screen. That's the reader's task, to communicate the Word of God.
- **Psalm responses:** People will more readily join in when they can see at a glance what they have to sing
- **Hymn verses and/or refrains:** Hymn books are still popular, but when people see a clear verse of a hymn on the screen – one shared source of information - they will be more inclined to join in

2. Theme titles

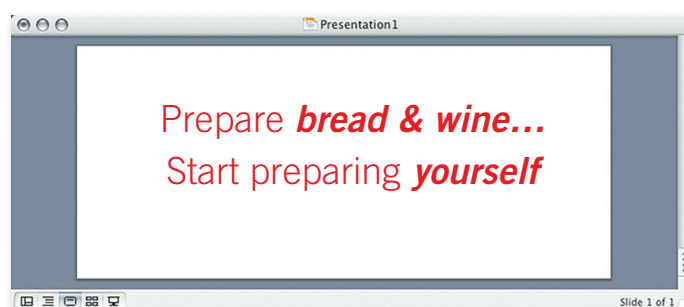
A “**banner**” *heading* can help to focus people on a particular theme. This is very useful before Mass begins, while people are gathering. It gets people thinking along a certain theme. For example:

- First Sunday in Advent
- Good Shepherd Sunday
- Feast of the Holy Trinity
- Vocations Awareness Sunday

3. Other messages

- **Scripture quotes:** Sometimes a phrase or even a word drawn from one of the readings may focus a person's attention on what to expect before the reading is actually proclaimed.
- **Participation “primers”:** People, especially children, often need a clue as to what's coming in the Mass. A simple phrase on screen may help. For example:

(at Preparation of the Gifts)



4. Parish notices and information

Increasingly, parishes are using the data projector to highlight important information. These things, of course, don't belong *within* the Mass and should only be screened *after* the *Prayer after Communion*. This could be useful while the parish notices are being read but care should be taken that the important *Concluding Rite of the Mass* doesn't end in chaos! *Parish Info* has to be brief, not distracting. It should not send a person into another world! This is where **PowerPoint** can be used to good effect.

Art Forms

Who was it said that a picture is worth a thousand words? No doubt about it, a visual work of art can capture a mood, convey an emotion, sum up a theme or message and do a host of other things. But, of course, a piece of visual art does different things to different people. Not everyone will have the same set of reactions. Some people are geared to colour, others like the form and shape. Still others will home in on clothing or faces. For some it will evoke intense feelings, while others will simply look at it dispassionately! It's all very subjective. It depends, too, on whether the art is familiar (like the *Mona Lisa*) or something novel and new.

This means that whatever artworks we choose to screen with a data projector we have to choose carefully, with people's reactions in mind, and not just willy-nilly. The question is: Will what we choose really help in getting the message across, or are we just using art for the sake of it?

Here are some different categories of artistic image:

1. Recognised art works (paintings, sculptures etc)

For example:

- *The Prodigal* by Caravaggio
- Rublev's *Trinity*
- *The Good Shepherd* (ancient Roman statue)

2. Images of Creation

For example:

- The Earth, taken from the space shuttle
- Trees, flowers, waterfalls
- Sun, moon and stars

3. The Face of Humanity

For example:

- Relationship: Mother & Child
- Family gathering
- Poverty
- War & Death

4. Realistic or impressionistic designs

For example:

- Palm frond; the gates of Jerusalem
- Crown of thorns
- Ears of wheat; a bunch of grapes
- Dry branches, stones

The use of colour

Colours can affect us psychologically. They can influence our perceptions and our behaviour. Soft pastel blues and pinks can calm us down and are used often in chemist shops and dentist's waiting rooms! Hot oranges and reds can stir us up and even put us on edge. And dark blue carpet in a church makes people go passive, quiet and unreceptive. What colours you choose for data projection have to suit the mood, theme or occasion.

There are ways of using colour. For example:

1. Colour of the text:

Since the words of the text have to be captured at a split-second glance, they have to stand out, clear and undistorted. People shouldn't have to take time to sort the words out. So you have to use a strong colour that doesn't go furry at the edges. The colour you will use for the words depends on the background. If the background is light, then a black script or some other strong dark colour is called for. If your background is dark (e.g. dark blue), then a strong contrasting colour is needed for the words. The TV channel SBS, creators of the best subtitles in the media business, always use strong **yellow** because the eye picks it up immediately. It stands out against the changing lights and shadows of a movie.

There is nothing worse than trying to make out words on a screen that are too light, too flimsy or too passive, that don't stand out from the background. People just give up.

2. Colour of the slide background:

As we have seen, colours evoke a range of moods, feelings and reactions. But too many **changes of colour** may defeat the purpose. It may please you, the programmer, to design a multi-coloured "work-of-art", but will it be effective in simple terms in what it is supposed to achieve? So don't overdo it. Choose a colour that will suit the liturgical occasion by all means, but make sure the text message superimposed on it gets through, crystal-clear.

Using animation techniques

Computer programmes today give you greater options than ever for "special effects". You can make texts dissolve, fly in from left or right, blink and be accompanied by a fanfare or a roll of drums! The possibilities are becoming endless. But in the context of the Liturgy this needs prudent judgment. What you present should not cause people to be glued to the screen, wondering what's coming next. This is where your programme turns into **entertainment**, and as such, becomes a major distraction from the Word of God, something that really undermines the Liturgy.

Using PowerPoint **may** call for a simple "dissolving" or "fading" of words, or a text that comes in from right or left. Your good judgment will ensure that the change of text on the screen is simplicity itself, causing no distraction at all. But no special sound effects should ever be used in the Liturgy.

Film & DVD Clips

What was said earlier about the automatic response of the eye to a moving object needs to be kept in mind. The Liturgy could not compete with a film sequence. The film clip would **always** win out! That means that the two things are incompatible and film or DVD clips should never be used during the Liturgy.

Using DVD clips before Mass: It is becoming common, especially at a Funeral Requiem Mass, for a DVD collage of photographs of the deceased person's life to be shown, often accompanied by a musical background. Whereas this would be more suitable at a vigil for the deceased, it nevertheless is appreciated by many who have come to pay respects.

A DVD, timed for no more than seven minutes long, which gives a photographic resume of the deceased person life, accompanied by music compatible with a church ambiance, can prove to be a worthwhile reflection leading up to the entrance hymn and the beginning of the Mass. But it should not intrude further into the Mass.

Working in ‘synch’ with the people

You and your data projector have to form a kind of partnership with the people in their responses. So you need to have a good sense of “timing”, so that when they need to respond in the Mass, the words will be there, right on cue. They won’t have to wait until the text appears, because a time lag at that point will be a real barrier to communication.

It also means that you will work ‘in synch’ with the priest, the cantor, and the singers. Verses of the hymns have to be right there, on time, exactly when they are needed. The response to the psalm likewise has to be there, right at the appointed time, and disappear when it is finished.

Chapter 4

A worst case scenario?

A worst case scenario?

Some years ago there was a group planning the Easter Vigil. They decided to “reorganize” and “re-shape” the sequence of what is, without a doubt, the liturgical *Night of Nights*. Their hope was to engage the community with the best of technology, beginning with the Vigil Service of Readings.

So when everyone came into the church, the dominant feature was a large screen set up right in the centre of the sanctuary area, in front of the altar. You couldn’t help staring at it. It was there, centre-stage, big and compelling. The group had set up a lectern somewhere to the side of the sanctuary, and this was where the readings were to be proclaimed from.

The Vigil began and the reader – off to the side - started with the Genesis account of the Seven Days of Creation. But our attention was riveted on the screen, where the sheer beauty of our Planet Earth, taken from the space shuttle, filled everyone’s imagination. The music too was stirring, dramatic, the opening bars of Richard Strauss’s “*Thus Spake Zarathustra*”.

And so on and so forth. One of the readings that followed was about God’s never-ending love for us. One after another, the screen was filled with slides of people: a mother and child, an elderly aboriginal woman, children at play, a young couple. The music accompaniment was something everybody knew: The bedroom scene from the movie “*Romeo and Juliet*”! It was just a bit hard to see how all this fitted together. What did it all mean, especially in the context of this Easter Vigil?

All we can say is that the planners meant well. Unfortunately, the screen show took on a life of its own. It was almost completely disconnected from what was happening off to the side – the reader, proclaiming the Word of God, had just become a weak *voice-over*! People’s attention was taken up with loads of things: the powerful images, the stirring music... but also in trying to work out how it all connected and what it meant. Things didn’t really hang together.

People’s reflection and spiritual thought-processes were torn in all different directions. Some people were hooked on the colours and the visual beauty. Others began to muse on the music. The imagination ran riot. But where was the Word of God in all this? Swamped, overwhelmed and basically sidelined, physically and mentally.

The whole experience became a contest between *entertainment* and *Liturgy*. And entertainment won, hands down. That’s why you and your data projector have to get it right. It’s the difference between being a help or a hindrance in a person’s meeting with God.

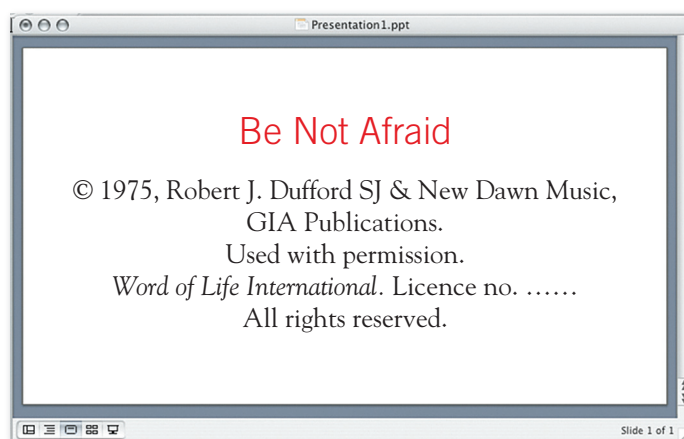
Chapter 5

Your responsibility regarding copyright

Your responsibility regarding copyright

In preparing PowerPoint slides, you have a legal responsibility to comply with Copyright laws and regulations. Parishes and schools should have copyright licence agreements for screening lyrics and music. The Licence number needs to be quoted.

The correct method of displaying copyright details is seen in this slide example for the title of a hymn or song:



So it is necessary to display:

- Title
- Copyright year
- Author
- Publisher
- Permission details (Licence number etc)

As in

Used with permission
Word of Life International Licence number (...)
All rights reserved

Chapter 6

Preparing your PowerPoint slides

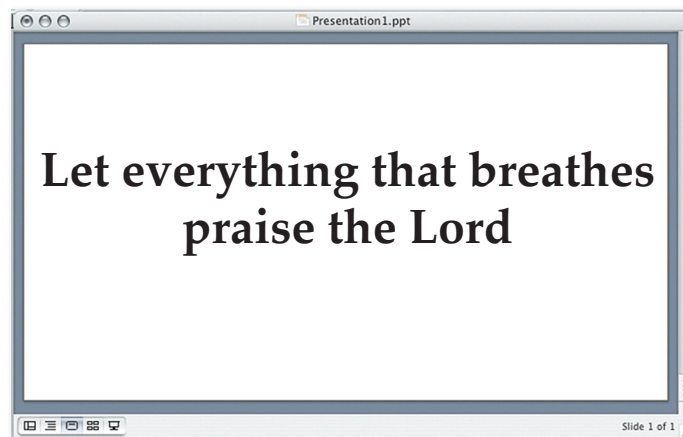
Preparing your PowerPoint slides

To prepare PowerPoint slides for the Liturgy, keep the following practical suggestions in mind:

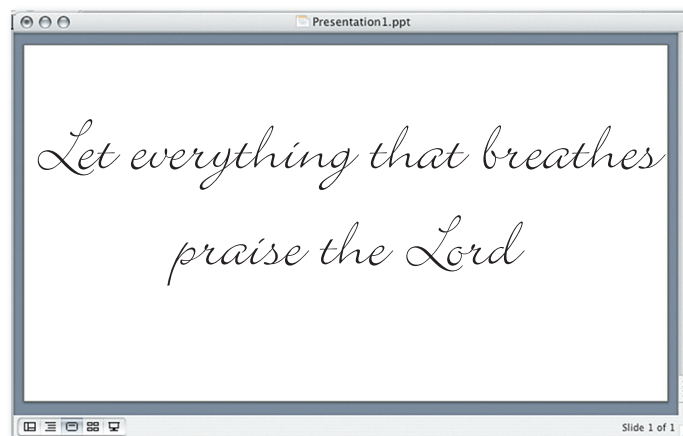
Your choice of Font

Choose a font that is *simple, straightforward and easy to read*. *Avoid fancy scripts*. There are so many to choose from and this will entail some trial and error. Once you settle on a clear font, stick to it. Don't chop and change, going from one font to another, otherwise the result will be less effective and even be confusing. Gauge your own reactions to these two examples:

Font: Palatino Bold – clear, easy to read



Font: Bickley Script LET (Bold) – harder to read



Size and definition of the Font

A good size for PowerPoint text is 32, 36 or even 40. This means that you will only be able to show five or six lines of a hymn, for example, at the maximum. One verse at a time is the best rule.

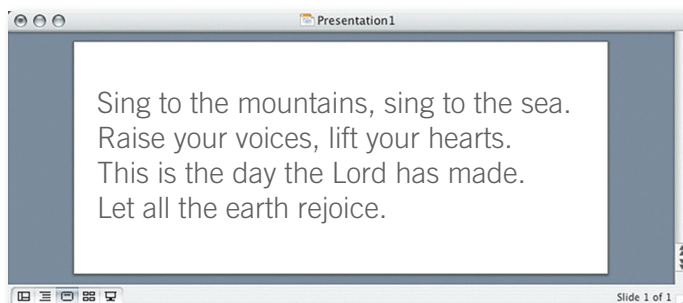
When you have typed a line or a verse, make sure the *definition* or sharpness of the text is in **BOLD**. You can further enhance this by adding **SHADOW**. This will really make the letters stand out, since shadow adds contrast. No one in the assembly should have trouble seeing these words on the screen.

Using “sound bites”

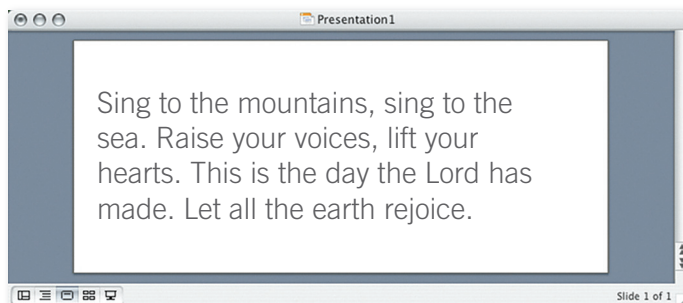
Set out the verse of a hymn or song in a way that makes perfect sense.
Set it out phrase by phrase, and don't break up a phrase.

Compare these two examples. See what effect each of them has on you, and what different tasks your brain has to perform to get the desired result:

Refrain:



Refrain:



Background

There are many options here. Some choose a white or very pale background, so that a black or very dark colour is used for the text. The opposite, a totally black or dark background with white text, can be effective as well. Some PowerPoint computer programmes offer a choice of strong colour backgrounds as well as many different slide designs. Choose one that is not too complex or distracting, and don't use more than one design at a time.

Don't use a *picture* as a background for text. This will automatically add a degree of difficulty in reading the words at a glance. It may even distort the meaning of what you want to communicate.

Slide animation

Within the Liturgy, the less *movement* on the screen the better. Faced with multiple possibilities in the way you bring on a text, there is a temptation to experiment with clever entry techniques – text that flies in from left or right, text that comes on with a checkerboard effect, text that blinks or bounces. This quickly distracts a person's attention and defeats the purpose. The best rule for the Liturgy is *simplicity of presentation*, otherwise you cross the thin line between worship and entertainment.

Chapter 7

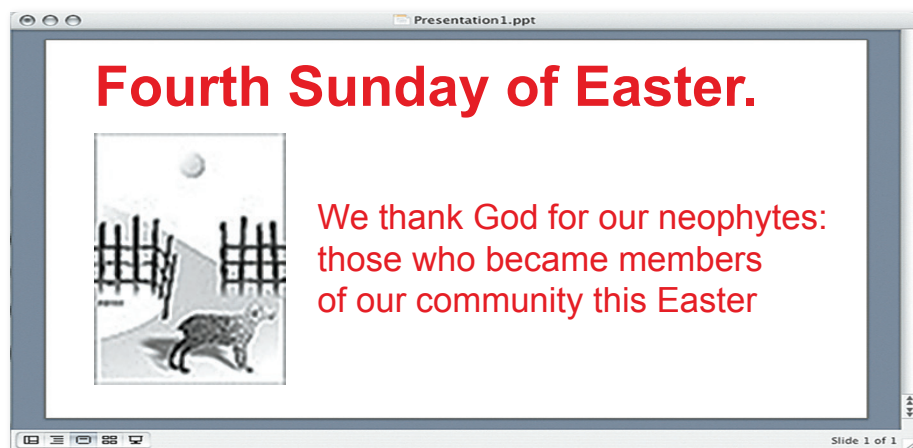
An exercise in the use of text & image

An exercise in the use of text & image

What may seem simple and self-explanatory to you, the PowerPoint producer, may in fact be confusing to the viewer. As a communicator, keep this prime principle in mind: As you write or design, always put yourself in “the shoes of the consumer”. Try to think as an ordinary viewer.

Look at the following slides and we will try to anticipate what an ordinary person at Mass may see in them.

Here is an opening slide, shown while people are gathering for Mass:



What do *you* see as you look at this slide?

The person-in-the-pew will probably focus on the words first and maybe then try to work out the graphics after. The text is fairly easy to read. The font (Ariel) is clear enough. But many people will hit a barrier with the word “neophytes”! Even if you go on to try and explain the term – “those who became members of our community this Easter” - the initial reaction will linger on. So, avoid any technical terms and spell out ideas in simple, quick-and-easy-to-grasp form. And avoid any unnecessary punctuation marks, such as the full-stop after **Fourth Sunday of Easter.** which says nothing to anyone.

The graphics? When the person shifts attention to the little picture, a big question mark arises in the mind. What is it, for a start? And then what connection does it have with the words on the screen? There are no ready answers to this in our slide!

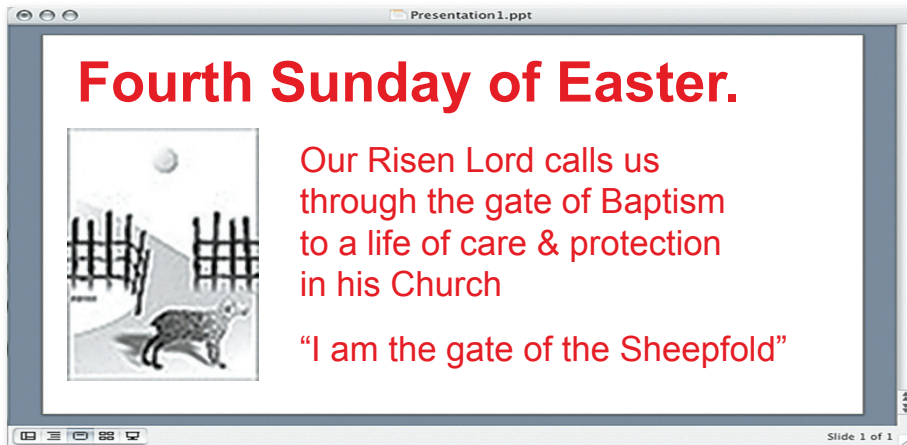
The background to the slide: The facts are that *you* have the background to all this, but the average person does not. The Fourth Sunday of Easter is always Good Shepherd Sunday, a theme that is common to Years A, B, and C. The graphic chosen to illustrate the theme shows a fence with the gate open, and a sheep. So, it must be **Year A** because in the Gospel Jesus says “I am the Gate of the Sheepfold”.

The trouble is that your average viewer knows none of this background and therefore can’t make the necessary connections. Very few people standing in the congregation would know automatically either that it is the 4th Sunday of Easter or that the theme is the Good Shepherd, unless they’re told.


What is our solution? One answer is to show TWO slides: firstly, one that opens up the theme, and secondly a slide that announces a further connection, that our newly-baptised may be confidently “at home” in the Christ’s sheepfold, the Church.

The initial slide
before Mass begins:

The main theme is
given, and words
and image connected



Fourth Sunday of Easter.



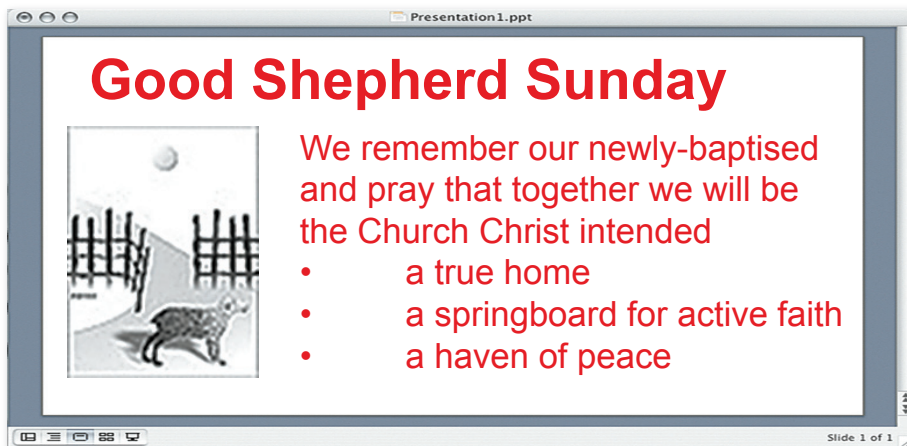
Our Risen Lord calls us
through the gate of Baptism
to a life of care & protection
in his Church

“I am the gate of the Sheepfold”


Slide 1 of 1

A secondary slide
before Mass begins:

a further extension
of the theme is
suggested



Good Shepherd Sunday



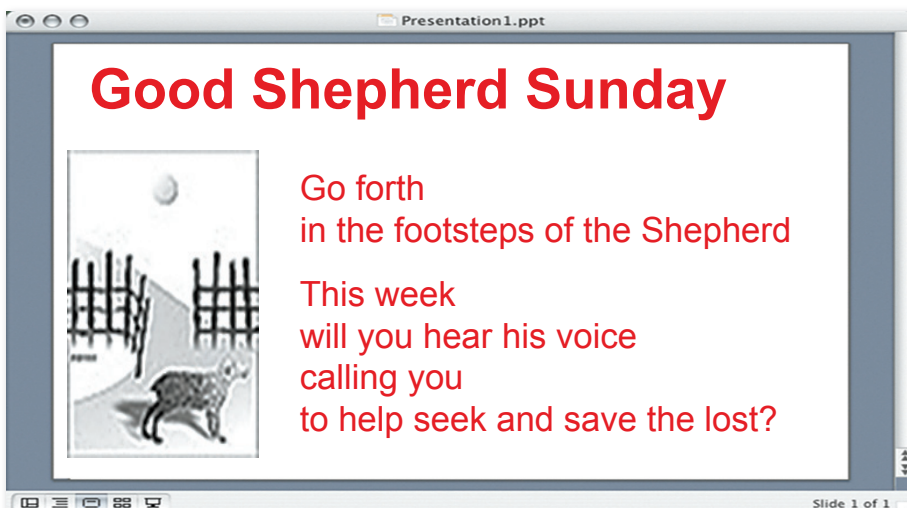
We remember our newly-baptised
and pray that together we will be
the Church Christ intended

- a true home
- a springboard for active faith
- a haven of peace


Slide 1 of 1

A concluding slide
at the end of Mass:

Possible ways of
continuing the theme
during the week
are suggested



Good Shepherd Sunday



Go forth
in the footsteps of the Shepherd

This week
will you hear his voice
calling you
to help seek and save the lost?

Slide 1 of 1

Chapter 8

Using the Data Projector in your parish: A brief survey of what is required

Using the Data Projector in your parish: A brief survey of what is required

It's much more than a passing fad. The data projector has become very popular and many people have come to expect its use at Mass. Of course, some will still prefer to use a hymn book. And many parishes have been using overhead projectors successfully for years, mostly for the words of the hymns. But overheads are often not bright enough and hard to read, and it takes a little time - and a sharp eye - to position them correctly on the projection plate. Added to that, you can only have one screen per machine. And in a large church this may be far from ideal. This is why the data projector has taken off.

Let's go forward to outline the main requirements when installing a data projector, and maybe open up some possibilities in arriving at an effective system appropriate for the Liturgy.

Basic components

To set up your data projector system you will need:

1. a laptop computer
2. special projection software
3. a data projector
4. a plug-in audiovisual (AV) point
5. special cables
6. a remote control
7. a screen or its equivalent

optional extras:

- a DVD player
- a small control interface
- a *Bluetooth* PowerPoint presenter

We can explain the function of each of these components as follows:

• **Your laptop computer:**

This is what produces the images in the first place. When purchasing a laptop it is important that it have adequate capacity. Some programmes take up a lot of space in the computer. It also must have the required plug-ports necessary to connect up to the system. So any old "el cheapo" laptop may not do the job.

So, your laptop should have:

- a warranty

- a USB port
- an external monitor output
- adequate memory or hard-drive space
- resolution (or focusing) capabilities

Also, you need to decide what main computer system you're going to use. There are two dominant computer systems in use today: The *PC* (or "personal computer") system and the *Apple* system. Your data projector will use either with no problem. But sometimes there can be hitches. If, for example, you have a PC computer and someone has prepared a presentation using the Apple system, it will still work, but the fonts may come out differently and special artwork may not translate from the other system.

• Special projection software:

The most common PC software programme is called *Microsoft Office* and you will need a licence to operate this or any other similar software. This incorporates the *PowerPoint* programme, a highly successful way of presenting a sequence of slides on the screen. Many different eye-catching templates may be chosen as a background for both texts and other artwork.

On top of this basic software programme, a facility called "*Display Manager*" is also very useful. This allows the operator to change from one programme to another without having to return to the desktop. So, you can present an integrated programme that incorporates *PowerPoint*, a DVD sequence or other artwork – all presented in an ordered way without fits and starts, chopping and changing.

• The data projector:

Most commonly in churches today the data projector is installed in a fixed position, often suspended from the ceiling. This ensures that it is safely out of reach and in a discreet but commanding position. It also means that it can be positioned accurately to take up the entire screen area required, and it will need no further setting up, adjustment or plugging in of cables.

The data projector's lamp is a key component. Your church may have special needs in regard to light intensity, and this has to be assessed before deciding on your purchase. The cost of a data projector lamp is surprisingly high, but then again the technology of light projection is very sophisticated. But this means that the lamp has to be carefully protected from being knocked or damaged, and it always has to be cooled down before turning off the machine. In a properly installed system these requirements are automatic. But if a separate machine (not a permanently fixed one) has to be manually hooked up, then handle with care!

Facts about the lamp:

- its life varies between 1000hrs and 3000hrs depending on the manufacture
- its replacement cost varies also, but it is commonly around \$1000 plus labour and access equipment

The beauty of an integrated system is that more than one data projector can be used simultaneously, for example, in different parts of the church at one time to accommodate different lines of sight.

• The plug-in audiovisual (AV) point and special cables:

Rather than a tangle of cables which have to be set up each time, an integrated system uses a permanent AV point where the laptop can be plugged in, and the special cables needed to carry the AV signals are permanently laid, out of sight.

• A remote control:

hand-held control allows the data projector to be switched on and off. It is also used for advancing each PowerPoint slide, as well as having other control features. A remote control is especially necessary if the data projector is suspended from the ceiling and out of reach. The trouble is that remote controls can be easily mislaid, and no

one can reach the machine suspended high overhead. Consternation. This is where a small **control interface**, a simple little keypad mounted on the wall near the main operating position, can ensure that you can always:

- turn the system on or off
- turn the data projector on or off
- lower and raise the screen

Optional extras

- A **DVD** player is recommended if you are going to screen film clips such as catechetical material, bishops' messages on DVD, and other special topics. These may not be suitable during Mass but may be very useful at other times. The alternative would be to run the DVD through your laptop computer, but since these film clips take up a large amount of space it is safer to use a special DVD player.
- A **Bluetooth PowerPoint presenter** is a small remote control device operated by radio. This lets you work the data projector from a wider range of positions in the church. It also allows some interaction with what is being shown on the screen(s), for example, an electronic pointer.

The Screen

- It has to be discreet!

This is one of the most challenging aspects of all, when setting up a data projector system. We have already seen how a screen can dominate and take attention away from the Mass itself. The liturgy demands certain key lines of focus essential to its celebration; for example, what is happening at the ambo and the altar. In no way should this be swamped by a screen. So, a great deal of thought is needed in positioning the screen.

- Can you use your existing screen?

Generally speaking, an existing screen previously used for overheads may not be suitable for use with a data projector. Firstly, the reflective surface of the screen needs to be of a special type. Also the proportions of the screen need to be of a ratio of 4x3. This ensures that the projected slide can fit perfectly, neatly filling the space.

• Types of screens

Sensitivity to the action of the Mass combined with appreciation of the architecture and aesthetics of the church give rise to various solutions:

The retractable screen:

This means that the screen can be raised or lowered out of sight when not being used. This is done electrically, and can be activated by remote control.

The transparent screen:

Made of special reflective material, this retractable screen can eliminate barriers to people's line-of-sight. This can be a good solution in churches with notable architectural features and stained glass windows.

Use of an existing wall?

Some churches have found it possible to project successfully onto a wall, even simultaneously in different sections of the church. Again, the reflective surface has to be of a particular kind and colour.

Finding the right position

• Clearly visible:

First of all, the right position for the screen is chosen so that everything on it is clearly visible to all. The result will be a unified congregation, since they will be motivated by the one visual source, and the level of response should automatically increase.

- **A connecting line-of-sight:**

The screen's positioning should also depend on making a real visual connection with what is happening at the ambo and around the altar. No sense in doing things at the altar if people are going to be looking in some other direction, away from the action. So there has to be an integration of ear and eye, a "marriage" of visual stimulus and active participation. This means careful line-of-sight positioning.

- **More than one screen?**

In some churches, it's not so simple. Some have transepts, some have side aisles, some are long and narrow. One screen alone may not do what's needed. And if the screen has to be enormous, then it may well be an eyesore! Many churches have found the answer by using strategically placed screens in various areas, served by perfectly synchronized data projectors. But again, we have to keep in mind the danger of fragmenting the congregation instead of unifying them, by unwittingly creating a number of separate audiovisual spaces. There's a lot at stake here.

- **Technical requirements:**

To find the right position for the screen you have to take into account the quality of light within the church. The amount of daylight, sunlight, artificial light and shadow will effect people's ability to see what's on the screen, and will be a important factor in determining the best screen position. This in turn translates into decisions about the output of the projector lamp necessary to do the job and the type of projector that will give the clearest picture in those conditions.

Further possibilities

- **LCD panels**

As well as the data projector and its screen, there are other creative solutions. LCD (or "Liquid Crystal Display") and plasma panels can also be used as part of the system. These are separate TV units but the overall screen size is normally much smaller than that used with a data projector. In the main LCD's are cheaper because there is no costly lamp to replace and the resolution is better. These panels can be useful for side-aisle sections, foyers, and crying-rooms. Even the sanctuary itself may benefit from an LCD monitor, because quite often the priest and ministers can't see what's being projected to the congregation. All these units are operated from the one control position.

- **A relay camera**

A small dome camera with zoom capabilities can easily relay what's happening at the ambo or at the altar. This can be a great asset in very large churches, where the elderly have difficulty seeing at distance. This camera can be integrated into the system, using the same projector equipment and screen.

Personnel

Leaving the discussion of equipment to one side, we look briefly at the people who will create what is to be shown on the screen and those who will operate the system during Mass. Ideally we are talking in the plural here, and not expecting just one person to do it all.

- **The *PowerPoint* creator**

A truly effective creator of PowerPoint presentations at Mass needs to be fully at home with the liturgy and not just with computer expertise. Certainly, the first section of our analysis of the data projector is of great importance, since it portrays the programme creator as a facilitator of the person's response in the liturgical celebration. As such, he or she has to be **at one** with the person, and know how to generate that person's best response through text and colour.

- **A team of Operators**

Ideally we're talking about a team rather than one person, because absence or sickness on any one weekend will throw things into disarray. For a start, a data projector operator needs to be computer-savvy, to know the function of each component of the system and how effectively to set it up, ready to go. An operator also has to know how to react when there's a problem.

Operators are required to set the system up in plenty of time before the start of Mass, making sure that all the equipment works, and testing it out to see that the PowerPoint programme can be

seen clearly. All this should not happen five minutes before Mass begins! In fact, a rehearsal of the presentation should be a matter of course. As a programme presenter, the operator should have an innate sense of timing of slides, and also when to mute the screen when it's not needed.

Finally, the operator has the task of turning the whole system off properly and of returning the retractable screens to their original base.

- **How many operating positions will you need in your church?**

In designing the system to suit your needs, you will have to decide the number and placement of your operating control points. For example, you may need a control point adjacent to the choir or one with visual contact with the sanctuary. Once this is decided, the necessary permanent cables and ports will have to be installed.

Security

Since we are dealing with costly equipment which also needs to be carefully looked after, it would seem necessary to have a secure cupboard or strongroom where there is a designated place for everything to be stored. Operators would have the responsibility of returning everything to its rightful place after each Mass, of noting anything that needs repairing, and seeing that everything is ready for the next presentation.

Ongoing maintenance

Most data projectors need to be cleaned every six months. The lamp has to be checked and, if necessary, replaced. The functioning of each component part of the whole system needs to be checked also, including the motors of retractable screens. In the case of a data projector suspended from the ceiling, this could mean some added expense if there is a problem of easy access. These factors need to be included when weighing up the costs of running a data projector