Creating a Multimedia Conference Proceedings Document

Letting people ‘relive’ the experience

interactive Point of View - Application Scenario

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Abstract

iPOV has developed a flexible process to capture the key events in a typical technical seminar and use that material to build a powerful multimedia replica of the seminar sessions. This whitepaper explains iPOV’s technical philosophy, discusses the arrangements that need to be made to capture suitable materials and describes iPOV’s process for converting that raw material into a sophisticated visual experience that lets the viewer see the seminar as though they were there.
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INTRODUCTION

Many successful technical conferences make the effort to generate a high quality ‘conference proceedings’. These typically range from compendiums of the delivered papers to reprints of the slide presentations. More recently, proceedings are being produced that use multimedia – to replay the presenter’s voice, image or even a video recording of the original presentation.

interactive Point of View (iPOV) has pioneered a better, faster way to capture the essence of a technical conference presentation using simple video techniques. This white paper outlines that approach and details the specific in-session capture methods that our approach recommends. As shown in Figure 1, the process evolves in three stages – capture, construction, and replay.

Record the Real Experience

Construct the Proceedings Document

Replay the ‘Virtual’ Experience

Capture occurs at the seminar site (or possibly at the client’s office). iPOV’s goal is to make the capture and recording process as foolproof as possible.

iPOV uses the raw material (video tapes, video files, PowerPoint files, etc.) to build a multimedia re-enactment of the sessions and seminars. iPOV has developed a unique set of tools and techniques to mine the raw material and assemble it into a polished record of the conference. iPOV can even repair most of the minor mistakes that crop up during the recording stage.

iPOV can also help the client to convert and pack the finished material onto the desired distribution format – whether to minimize the number of CDs, build a streaming web site, or craft a picture and text transcript.

Ultimately, the client will receive royalty-free master copies of the proceedings in the desired format(s). The client can distribute or resell these as they see fit.

This whitepaper explains the iPOV model, iPOV’s unique processing contribution, and gives the reader a pragmatic guide to the capture and recording process. With this information, the reader should be able to decide how they could apply iPOV’s services to their next conference or seminar.
THE GOAL – CREATE THE ABILITY TO RELIVE THE SEMINAR

Since its inception, iPOV has been seeking ways to use video and multimedia to communicate practical knowledge. In doing so, it has always focused on one consistent design goal:

_The finished multimedia document should show the viewer what they would have seen if they had been physically present at the event._

The Original Seminar Experience

All of iPOV's design approaches begin with an analysis of the experience that iPOV is trying to mimic. In this case, iPOV is trying to replicate a typical seminar experience. Figure 2 shows the layout of a typical seminar room.

![Figure 2 - Typical Seminar Room](image)

In most business or technical seminars, audience members will spend their time looking at one of the following scenes:

1. The voice and actions of the Presenter as they conduct the seminar.
2. Images projected on a screen at the front of the room.
3. Other physical action that might be occurring in the seminar room.

In software seminars, this list usually omits the third scene and concentrates on the first two - the actions of the Presenter and the images on the projection screen. There may be occasional role-play or physical demonstrations, but these are generally exceptions.

The iPOV 'virtual' Seminar Model

iPOV has developed a model for a ‘virtual’ seminar experience that is designed to recreate the three main views taken from the original seminar session. This
model defines a dedicated multimedia format for each of the three ‘views’ that an audience member would normally see:

1. A **PowerPoint presentation page** with a small video clip of the Presenter’s ‘talking head’ combined with a screen capture movie of the PowerPoint slide show.

2. A **software demonstration page** with a single maximum resolution screen capture movie clip for any software demonstrations that the Presenter give.

3. A general-purpose **action page** that contains a single video clip of any other action that occurs during the session. This could include a large format video of the Presenter’s introduction or a video clip showing some key action or activity in the room.

**The Integrated Conference Proceeding**

The three pages described above combine into a simple multimedia design whose structure closely resembles the structure of a conventional text proceedings document. Figure 3 illustrates how that structure is implemented using HTML, Jscript and Windows Media Player.

![Figure 3 – Overall Proceedings Document Structure](image)

As iPOV’s design goal demands, the document structure in Figure 3 provides a very close approximation of the views and sounds that an audience member would experience if they were to physically attend the conference.

**PowerPoint Presentation Page**

The page layout in Figure 4 shows the layout that iPOV uses to mimic attendance at a typical PowerPoint presentation. This page contains two synchronized
movies. The small ‘talking head’ in the upper left corner shows the Presenter throughout the presentation and replays the Presenter’s voice from the actual presentation. The larger movie to the right shows the PowerPoint slideshow that the Presenter is discussing. At the bottom of the larger movie, there is a tracker bar and a set of basic player controls that operate both video clips in tandem.

**Note:** With the Windows Media Player tracker bar, the ‘virtual’ seminar may actually be better than the original session. The viewer can instantly move to any point in the presentation to skip a boring part or replay an interesting section.

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**Figure 4 - A Virtual PowerPoint Presentation**

The 'talking head' video clip is added to Figure 4 to break up the tedium of watching a static slide show. This design decision reflects iPOV’s experience in observing a lot of real lectures and seminars. If seminar participants have to stare at static slides and listen to a Presenter drone in the background, most quickly fall asleep or leave. However, even a small video clip showing the Presenter’s face can add enough spice to make the PowerPoint presentation much more interesting.

**Comment:** The ‘talking head’ video is included in Figure 4 to relieve the tedium of watching a static slide show. This reflects iPOV’s experience in watching a lot of lectures and seminars. If seminar participants have to watch static slides and listen to a disembodied Presenter drone in the background, many will quickly fall asleep or leave. However, even a small video clip showing the Presenter’s face can add enough spice to hold viewers’ attention.

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**Software Demonstration Page**

The second major element of iPOV’s virtual experience relies on a screen capture movie to recreate the experience of watching someone operate a computer desktop.

Figure 5 shows an example of the type of detail that is possible with this method. It is important to note that this is a movie – with a full view of the actions on the desktop and with the voice of the Presenter as a running commentary.
This page omits the ‘talking head’ to save valuable screen space and because it is not needed. If the software demonstration exhibits any reasonable amount of action, the viewer’s eyes will focus on those activities. Further, if the viewer can hear the Presenter explain the on-screen activity, they will have little difficulty in maintaining their interest. An extra ‘talking head’ will be a needless distraction.

**General Action Video Page**

The third design element shows a video of action that happens in the seminar that cannot be displayed by the first two elements. A page with this type of single-purpose material is shown in Figure 6. This can be used, for example, when a moderator introduces the Presenter. It would also be appropriate for situations where the Presenter walks around to engage in a question and answer session with the audience. In these cases, the action will be captured on a video camera.

To be authentic, the video must be captured in the session proper. If it is ‘cooked up’ before or after the event, it should be carefully labeled as such. Otherwise, audience participants will recognize that a substitution has been made.
RECORDING THE ORIGINAL SEMINAR

Ideally, the proceedings record should show everything that an audience member would see and hear during the course of the seminar. This means capturing all of the elements that are active during the presentation – Presenter, screen content and demonstrations (if any).

Fortunately, while there are three elements, there are only two capture methods that are required for most presentations – conventional video and screen capture movies of the action on the computer display.

Recording Video

Two of the three elements (the Presenter and physical demonstrations) have to be recorded with standard video technology. This can be done with relative ease using inexpensive camcorders. Figure 7 illustrates how two inexpensive video camcorders can cover the entire seminar.

Camera 1 is focused tightly on the presenter and holds that focus throughout the presentation. This camera tries to look at the Presenter as an individual, the way a member of the audience would see him or her. Many Presenters (especially at technical presentations) stand at the podium or sit behind a desk and let the onscreen presentation be the star. Occasionally, however, Camera 1 may need to be more mobile – for example if the Presenter decides to ‘work the audience’.

Using a second camera is optional. If the Presenter stands at the podium and speaks to their slides, Camera 2 is just a backup. It can be used to scan the audience or take a wide shots of the front of the room. However, its footage
probably won’t be important enough (or different enough from Camera 1) to merit inclusion in the finished document – especially if file space is an issue.

Camera 2 will be needed, however, if the presentation has more than one Presenter or if the Presenter plans to conduct a demonstration that is too big or too active to do at the podium. While this sort of justification could occur during a software seminar, it is not common. In most cases, one camera will see everything that is really important.

**Guidelines for Video Recording:** There are several things that the Presenter and the camera operator can do to make post-processing more accurate and the project turnaround faster:

- **Encourage each Presenter to follow a very basic script:**
  - Self-Introduction
  - Presentation
  - Closing and Thank you

  As well as good manners, this establishes basic start and stop conditions that may help iPOV if it has to decipher the resulting videotape.

- **Encourage the Presenters to remain stationary (ideally at some designated location) whenever the discussion is focused on the projection screen.**

- **Let the tape record the entire session without interruption.** Do not stop the videotape for minor breaks or session pauses. iPOV can work more easily with a complete record of the session context. Also, do not rewind the videotapes to cover ‘bad footage’ for the same reason.

- **Keep a running log (shot sheet) of the start and stop times for major session segments. Do not reset the tape counter while making a given tape.**

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**Recording Computer Activity**

Most seminars rely on computers and LCD projectors to display visual materials. However, computer screens are being projected at finer and finer resolutions. An 800x600 resolution is routine and 1024x768 is increasingly common. Both resolutions much finer than the images that conventional video can capture. Even the best camera will record those screens badly. Fine detail (especially small text) will be distorted or hopelessly muddled. The answer is to turn to other recording technology – screen-capture movie software.

**Screen Capture Movie Software**

The most flexible and reliable way to capture the action on the computer desktop is use a screen capture movie software program (SCMP). iPOV has had good success with two tools in particular:

- HyperCam ([www.hyperionics.com](http://www.hyperionics.com))
- Camtasia ([www.techsmith.com](http://www.techsmith.com))

There are other programs that claim to fulfill the same function, but iPOV has not rigorously tested any of these.

The SCMP must be installed on the computer that is running the software that you plan to show during the seminar. The SCMP is installed on the computer and
configured and started before the demonstration. Once started, the SCMP runs
unobtrusively in the background – leaving the computer free to run the
application programs of interest.

A competent SCMP does two things:

1. It takes full resolution ‘snapshots’ of the computer screen (or a designated
window or sub-region of the screen) at specified intervals and saves these
snapshots as frames in an AVI movie. The speed at which frames are
captured is set when the capture session is started and can range from 1
frame/sec up to conventional video rates of 25-30 frames per second.

2. If the computer has a sound card, the SCMP can be set to capture the
signal that comes into the microphone input port. This signal is saved as
the audio track on the AVI movie that is created in (1).

These functions allow the SCMP to record the visible activity on the computer
screen, together with a commentary from the person that is guiding that activity.
The resulting AVI movie can be replayed on virtually any contemporary Windows
PC.

**Important:** All SCMPs record the screen at the display resolution that is in effect on the capture
computer at the time of capture. If the resulting AVI movie is rescaled (e.g., in a video editing
program), all of the fine details (especially text) will be badly distorted. Thus, the capture resolution is
an irreversible decision that must anticipate how the material will ultimately be used.

If there is any doubt, contact iPOV coaching staff for guidance. We have had a lot of experience with
this issue. At the very least, we can explain all of the alternatives and their respective ramifications.

For most seminars, the options for using an SCMP are limited by the inherently
simple and predictable structure of the seminar format. Typically, there are two
generic types of computer activity that will cover most seminar situations:

1. PowerPoint presentations
2. Demonstrations that use other software applications

On one level, these situations are the same. They both involve capturing movies
of software running on a computer desktop. We distinguish them mainly because
the PowerPoint situation is a bit simpler and more forgiving.

**Recording PowerPoint Presentations**

PowerPoint slideshow presentations are relatively easy to capture and process –
just set the SCMP to capture the entire computer screen and begin the slideshow
presentation.

For PowerPoint presentations, the frame capture rate can be set quite low (2 or 3
frames per second) because PowerPoint scenes change relatively slowly.
Generally, each screen will sit for several seconds before the Presenter moves on
to the next slide.

**Guideline:** By all means use the ‘slide show animation’ feature to make the slides more active. The
resulting movie will be much more interesting to watch. However, try to keep the animation simple:

- Don’t make the text or graphics elements ‘fly in’ or ‘zoom in’. Just have them ‘appear’.
Animate just enough elements to make something happen every few seconds. You don’t want the viewer to stare at a fixed screen for more than 10 seconds, but you also want them to be able to recognize and absorb the new material as it is added.

PowerPoint slides have a characteristic that makes them more forgiving to capture and process – good practice dictates that they use large fonts. As a result, PowerPoint slide presentations are one of the few places where video editing software can rescale or manipulate the resulting AVI movie without introducing too much distortion. This means that iPOV can often find ways to correct capture mistakes that would be unrecoverable with other types of content.

Finally, PowerPoint slideshows are special because their display sequence is fixed and predictable. iPOV has taken advantage of this fact when a PowerPoint capture session hit a glitch. iPOV can use the session videotape to help it recreate the missing AVI file. An iPOV worker sets up the PowerPoint file for capture and then starts the session videotape. Every time the Presenter indicates a topic or slide change, the iPOV worker advances the PowerPoint slideshow. The finished AVI movie is functionally identical to the one that would have been made in the seminar session.

**Recording Software Demonstrations**

If the seminar presentation uses something other than a PowerPoint slideshow, the capture process is the same – but there may be special factors to consider. The following are some of the challenges that iPOV has encountered in the past:

- Some software needs to run at large screen resolutions (e.g. CAD and software development environments).
- Some software will compete heavily with the SCMP for CPU and memory resources.
- Some software may do sophisticated drawing, rendering or movie replays that the SCMP has difficulty capturing.¹
- Some software is designed to connect to other devices (e.g., linking to a PDA or talking to a server).

There is generally an easy way to handle most of these situations. However, the solution may require a bit of anticipation and planning. Nonetheless, there are situations (rare in iPOV’s experience) where an SCMP simply cannot be made to work. These will have to be recorded in some other fashion.

Fortunately, most software demonstrations involve no more complexity than the typical PowerPoint slide show. By using a relatively fast presentation computer and setting the screen resolution to a reasonably large format (e.g., 800x600 or 1024x768)

¹ For example, high performance video games are a problem for an SCMP that is recording 3 or 4 frames per second. Even if the SCMP can ‘see’ the screen display (and high end video card hardware features may prevent that), the resulting AVI movie will look like a jerky slideshow. If the SCMP capture rate is pushed up to 15 or 30 frames per second, then the competition for CPU cycles may hurt both programs.
1024x768), it should be possible to capture most software demonstrations with the same SCMP setup that is used for the PowerPoint slideshow.

Caution: The choice of screen resolution may be complicated if there is a desire to distribute the resulting movies over the Web. If this is the case, it is better to capture at a lower resolutions (640x480 or 800x600) that will automatically generate smaller source movie files. These, in turn, will be easier to convert to formats that will stream successfully.

Hosting the SCMP Software

In simple seminar situations, the SCMP will be installed on the same computer where the PowerPoint slides and software demonstrations reside. This typical arrangement is shown in Figure 8. The arrangement has the virtue of simplicity, but it increases the likelihood that high load software demonstrations will overstress the presentation computer.

Figure 8 - Stand Alone SCMP Installation

An intriguing alternative is shown in Figure 9. This configuration utilizes the features in Microsoft XP’s new Remote Desktop Connection software. Presenters install their PowerPoint files and demonstration on PCs that are set up as hosts for Remote Desktop Connection.

The presentation PC is configured to run only the SCMP software and the Remote Desktop Connection client. This arrangement effectively isolates the capture and display function from any potential conflict with demonstration software execution. This, in turn, will reduce the possibility that the SCMP software will fail to record a session and it will allow each Presenter to set up the remote PC exactly the way they want.
iPOV expects that this configuration will become more popular as XP installations proliferate. In the meantime, a functionally similar, but more costly, configuration can be created using third-party remote operation software like pcAnywhere.

**Recording Audio**

The Presenter’s voice is a critical component in any seminar. In addition to its direct value, it provides the timeline to which all of the other events (and eventually the other media) are anchored. Figure 10 depicts a simple audio setup that will capture the key elements and provide iPOV with valuable reference information to aid in subsequent processing.

In Figure 10, the audio system uses two microphones. The primary microphone is the one that feeds Camera 1. It should be optimized to pick up the Presenter’s voice as clearly as possible. It will create an audio track on Camera 1’s videotape and guarantee that the Presenter’s words and actions remain completely synchronized.

The second microphone should be attached to the microphone input on the PC that is hosting the SCMP. This microphone does not have to be tuned or optimized to pick up any specific location or sound. It’s job is to pick up enough room sounds to enable iPOV to synchronize the SCMP content with the Presenter’s words and actions.
**Note:** The best microphone and sound equipment should always be used with Camera 1 rather than the computer that hosts the SCMP. In fact, iPOV recommends that the computer’s audio capture settings be set as low as possible. Trying to capture higher quality audio will put more load on the CPU, but it will never be used in subsequent processing.

**Managing the Capture Process**

While it is important to use the right techniques to record the different aspects of the seminar presentation, it is just as important to decide when and where to apply those techniques. Figure 11 shows the possibilities for the different capture media.
PowerPoint movies must be either be recorded during the session or ‘reverse engineered’ after the session is over (provided that a videotape record exists). They cannot be recorded in advance because they will be shown in conjunction with the Presenter’s ‘talking head’ (see Figure 4) and the Presenter’s words must match the slide show transitions.

The most convenient time to capture the AVI movies of software demonstrations is during the seminar session – when the Presenters all present and all of the other material is being captured anyway. However, since they will be displayed alone on a page (see Figure 5), the AVI movies of software demonstrations can actually be recorded at any time.

For high profile presentations, it might be a good idea to record them before the seminar. It might even make sense to replay the captured demonstrations in the seminar, rather than trying to generate them ‘live’. This would have the added advantage that it would serve as a very structured rehearsal.

Alternatively, the software demonstrations can be recorded after the seminar session is over. For example, the Presenter could record a revised demonstration to correct a mistake or glitch that occurred in the live session. The Presenter might even change the demonstration slightly to better answer a question that was raised during the live session.

**Caution:** This will not work if the session must be recorded exactly as given. Unlike the PowerPoint slide show, there will probably not be enough information on the Camera 1 session videotape to reconstruct all of the actions that were visible on the computer screen. In this case, it may be necessary to use a second camera and keep it pointed at the projection screen while the demonstrations are being given. The videotape won’t be viewable, but it will contain enough visual cues that the Presenter should be able to reconstruct exactly what he or she did.
Finally, all of the physical activities must be captured while the session is taking place. It will be difficult or impossible to restage the event to replace any missing videotape. This puts a heavy burden on the planners and operators of the video recording operation.

When all of the capture issues are taken together, it is possible to define a set of basic recommendations that will greatly increase the odds for a successful capture effort for most seminars:

**Overall Session Capture Guidelines:**

1. **Set up one video camcorder to record the Presenter.** *Let the camera run continuously throughout each session.* Stop only at major breaks to change tapes.

2. **Install the SCMP on a fast computer with settings sufficient to capture the expected software demonstrations.** *Let the SCMP run continuously.* Stop and start it only at major break points (e.g., mid-morning coffee break and lunch).

3. **If you need to make an accurate record of all of the software demonstrations,** use a second camera to record the projection screen during the seminar.

4. **Collect a copy of the source file for each PowerPoint presentation.** Send these to iPOV when you send the other captured material. In a pinch, iPOV can reconstruct missing PowerPoint movie captures.

5. **If you expect that some demonstrations may cause problems,** run them from a separate computer (e.g., bring in a laptop and temporarily hook it to the LCD projector). Try to capture these problematic sessions *off-line before or after the seminar is over.*

**iPOV Coaching Support**

iPOV has accumulated a wealth of practical knowledge about the best methods for capturing information in a non-studio setting and iPOV is always eager to share its expertise with its clients.

iPOV can coach clients to implement an effective capture strategy. iPOV’s staff have the technical know-how, procedures, experience and people skills to make the client’s staff feel comfortable and confident. We can walk them through the capture process in a friendly, helpful manner – often over the phone.

In the event that a client wishes more direct support, iPOV can send a coach to the client’s site to assist and trouble-shoot during the seminar. Although this is a premium service, it can be a very good investment if the stakes are high and preparation time is short.
CONSTRUCTING THE PROCEEDINGS DOCUMENT

When the raw video and SCMP files have been captured, it is iPOV’s job to turn them into finished, distributable multimedia material. As shown in Figure 12, this process is divided into four activities. The first activity, paradoxically, is iPOV’s willingness to coach its clients to organize the session capture activity in the best possible way.

As preceding sections suggest, iPOV’s content construction process really starts before the capture process is planned. iPOV plays a large role in helping clients to setup an effective capture strategy – either by providing information to help them in planning or by sending iPOV staff to coach the process.

Once material is successfully recorded, the subsequent processing tasks are done by iPOV’s in-house staff. The following sections examine each of the three major stages of this process as iPOV takes raw input materials and transforms them into a professional, finished multimedia document.

Converting and Organizing Assets

iPOV’s first task is to convert the raw video materials into digital material that iPOV can use to construct the proceedings document. This task (shown in Figure 13) involves extensive video processing and editing, as well as care in cataloging and managing the submitted assets.
A two-day conference with a single track of sessions could easily generate several hundred distinct video clips – each of which must be trimmed to the correct length and cataloged for subsequent retrieval. The challenge is compounded by the fact that raw digital video files may total as much as 10 to 20 GB.²

Materials Receiving

No matter how well the capture sessions are planned and executed, people still make mistakes and send us incorrect materials or data.

- iPOV verifies with the client that all material to be processed has been received. Once materials are received by iPOV they are comprehensively logged and uniquely labeled. Throughout production, these labels are used to manage and track the physical assets (tapes, disks, emailed files, etc.). iPOV does not lose client materials!
- iPOV systematically checks all input videotape materials to verify that the content is intact and suitable for video capture. If our coaching advice was followed, this is generally a formality.
- iPOV systematically checks all input digital video files to verify suitable file formats, codecs, screen resolutions, audio quality, etc.
- iPOV systematically checks all non-video assets (e.g., PowerPoint files, pdf files, Word Documents, Web links, etc.) that are destined for incorporation into the finished proceedings.
- When iPOV has received and cataloged all of the material, it issues a work authorization request that details the quantities of materials to be processed, the anticipated processing time and the expected processing price.

Video Capture and Conversion

- iPOV will process all videotapes to create digital video files that can be edited and encoded into suitable playback formats.
- iPOV will extract, label, store and organize the specific video clip segments that are associated with each of the PowerPoint pages and action pages.
- iPOV will extract, edit, label and store the relevant content from the submitted AVI screen capture movie files. Many of these files will be continuous captures spanning multiple sessions. iPOV will extract the relevant sub-clips and catalog them in iPOV’s proprietary authoring system database.
- iPOV will extract, label and store the audio tracks from the video clips that are destined to serve as the audio track for the software demo pages.

² iPOV retains initial digital video files in its system for some time. Eventually, they will be archived when the compressed publication formats have been created and approved. Even the compressed formats could require 1-2 GB of storage.
Video Editing

- iPOV will re-encode received material into a common, consistent format prior to submitting it for subsequent processing. If iPOV cannot put material into a suitable format, it will inform the client immediately to try to find a workaround.
- iPOV will try (where it is reasonably possible) to fix minor flaws in the captured material. While iPOV does not offer special effects editing, it will use common editing techniques to salvage as much usable material as possible to avoid asking the client to re-shoot material.
- If material must be re-shot (normally a rare occurrence), iPOV will provide precise guidance so clients can re-shoot the minimal amount of material required to fix the problem.

Constructing the Proceedings Document

When iPOV is confident that it has received all of the necessary input materials, it will begin the process of constructing the proof copy of the Proceedings document. As depicted in Figure 14, this process involves two major tasks: a) selecting and/or designing a graphics theme and, b) designing and constructing the system of buttons and links to allow users to effectively navigate the Proceedings document.

![Figure 14 - Constructing the Proceedings Document](image)

This phase of the process typically requires some consultation with the client. iPOV can gather most of the needed information from the printed Conference program - provided it has been updated to account for last minute changes. Most of the remaining questions will be resolved when iPOV sends a ‘proof’ copy of the Proceedings to the client for review.

Graphics Design

- iPOV will work with the client to develop a 'look and feel' for the Proceedings document. The structured nature of the presentation material ensures that this design step is well controlled.
Site Navigation Design

- The iPOV authoring system gives iPOV the ability to change many details in specific page layouts and to add a wide variety of customized design elements—without compromising the rigor of our asset management database. This capability is much more than a simple template system. It allows us simultaneously combine repeatable structure with creative flexibility. All this is done behind the scenes, so our clients do not need to become expert a new technology or program.
- iPOV will use client-supplied information to construct the table of contents and the navigation system for the virtual proceedings. In many cases, existing conference program books will provide all of the information that iPOV needs to construct the necessary pages.
- iPOV will assemble the video clips, audio clips, navigation text and other relevant assets into a ‘proof’ copy of the Proceedings.
- If requested, iPOV can accommodate specific ‘customizations’. These can include links to additional files (e.g., pdf documents), graphics and logos and help files. (Note: Extensive use of customizations may result in additional fees being charged.)

Document Construction

- iPOV has developed a process that is very flexible and adaptable to changing and varying needs, while remaining extremely fast and efficient.
- Every step of the iPOV process is defined by either a) a dedicated software tool, or b) a written procedure.
- iPOV systematically creates backups at key points in the process.
- iPOV’s production facility is organized so that many of the document construction steps will take place in parallel. This dramatically reduces the expected processing time.

Format Management and Publishing

One of iPOV’s strengths is its ability to help clients organize effective publication for their conference material. The most important decision involves choosing the correct format for ultimate delivery of the video content. iPOV can deliver finished materials in a wide range of formats (see Figure 15). It can also help clients to make the most effective choice.
Figure 15 - Managing Formats and Publishing

Delivery technologies are evolving very rapidly and clients face a bewildering range of choices, depending on their ultimate objective. If a client wants to distribute the proceedings on DVD, they are likely to choose a very different format than if they plan to stream it from a public web server. iPOV can help make the right decision and can then implement that choice in an effective and reliable document.

If iPOV’s guidelines for the capture process are followed, iPOV will receive raw material in high quality source video formats that can later be converted to a wide range of final delivery formats. Table 1 lists three scenarios that would be suitable for many clients.

| Design Criteria |
|------------------|------------------|------------------|
| No Size Restrictions | Minimize Number of CDs | Web Streaming |
| **Action** | **Software Demo** | **PowerPoint** |
| MPEG-2 | AVI | MPEG-1 & AVI |
| Low-bitrate MPEG-1 | Flash Movie¹ | Low-bitrate MPEG-1 & Flash Movie |
| Low-bitrate Windows Media | Flash Movie | Flash Movie |

(1) Building Flash Movies is a premium service.

Table 1 – Typical Proceedings Delivery Scenarios
Each client’s delivery scenario has the potential to be a unique design challenge. iPOV takes the client’s performance criteria and budget and finds the best combination of layout and format to meet their needs. To do this, iPOV can draw on its experience with a wide range of video formats (some of which are listed in Table 2).

<table>
<thead>
<tr>
<th>Media Format</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MPEG-2</strong></td>
<td>This is very high quality video format that is suitable mainly for DVDs. Its file size is too great to be used on CDs and its bandwidth requirements would severely tax most Intranets.</td>
</tr>
<tr>
<td><strong>MPEG-1</strong></td>
<td>This is the most widely accepted format for playback of camera-generated video files. Its quality is still among the best and it is an excellent choice for CDs.</td>
</tr>
<tr>
<td><strong>Low bitrate MPEG-1</strong></td>
<td>It is possible to ‘dial back’ the MPEG-1 file size (and video quality) significantly. iPOV has found this to be a useful format when there is a need to pack more material on CDs.</td>
</tr>
<tr>
<td><strong>Windows Media</strong></td>
<td>Windows Media can span a very wide range of file sizes, qualities, and bandwidths. They are very useful where file size is an issue, but they do not perform as well as some of the other formats when the viewer tries to use the random access tracker bar.</td>
</tr>
<tr>
<td><strong>Windows AVI</strong></td>
<td>Windows AVI files are the natural output of the SCMP software. They are also widely viewable on any Windows PC. However, the files are too big for many applications and they cannot be streamed from a web server.</td>
</tr>
<tr>
<td><strong>Flash Movie</strong></td>
<td>This is a Flash slide show that is constructed from frames that are hand-selected out of the source movie file. The Flash movie files can exhibit high visual resolution, yet are very small and stream quite effectively. iPOV can convert any source video to a Flash movie as a premium service.</td>
</tr>
<tr>
<td><strong>Text Transcript</strong></td>
<td>As a premium service, iPOV can transcribe the words spoken during the presentation. In most cases, iPOV will be able to extract a full transcript of the Presenter’s statements. Depending on the quality of the audio setup, iPOV may also succeed in transcribing audience questions and comments.</td>
</tr>
</tbody>
</table>

**Table 2 - Commonly Used Media Formats**

**Processing Turnaround Time**

iPOV’s processing time depends mainly on the quality of raw captured material that is provided to iPOV, together with the quality of the labeling and documentation that accompanies it. For example, iPOV should be able to process a 20-hour seminar in less than two weeks, provided that:

- The material was captured cleanly.
- The submitted materials are well documented and clearly explained.
- There is a client contact that can give quick corrections and guidance.
APPLICATIONS

iPOV’s comprehensive approach to building a dynamic conference proceeding offers a rapid, cost-effective way to share complex seminar information with a large number of people.

This service is intended for conference organizers where the organizer either a) pays for the participants to attend, or b) is very concerned that as many members of a given target group as possible are able to attend.

Candidate applications include product or program launch conferences, national sales force meetings, corporation-sponsored executive presentations and product marketing conferences. iPOV’s virtual proceedings service can create a large cost saving by letting people attend – without having to physically travel.
SUMMARY

iPOV offers a unique service to organizers of professional and technical conferences.

Working with iPOV’s coaches, the client can arrange to record the key events of each presentation in a set of high quality videotapes and video files. iPOV will convert these raw materials into powerful multimedia documents that closely approximate the experience of being in the live audience at the seminar sessions.

The iPOV process – from coaching and capture to processing and delivery – is thoroughly organized, completely thought out and well tested. As a result, iPOV can deliver this high value service with very short turnaround times.