



NAVIGATING UPSTREAM

*Facilitating Asynchronous Delivery
of Continuing Pharmacy Education
via Streaming Media*

34th Annual Professional Practice Conference: 03 February 2003

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Pharmaceutical Sciences



"Our Age of Anxiety is, in great part,
the result of trying to do today's
jobs with yesterday's tools."

– *Marshall McLuhan*

SINK OR SWIM



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SURF'S UP

- Informatics Rotation
 - Dr. Robert Balen
 - A Canadian first



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BACKGROUND

- Vancouver General Hospital
 - Largest hospital pharmacy department in BC
 - 106 staff pharmacists
 - Undergraduates, residents, PharmD students
- PowerPoint™ Presentations
 - Over 70 contact hours annually
 - Continuing pharmacy education (CPE)
 - Student and resident rotation requirement

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"I'm really not a computer geek. I just pretend to be one at work."

– *Marganne Meyer,*
WITS MacNexus Member

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DECIPHERING THE LINGO

- Online Viewing of Educational Material
 - Asynchronous = multiple viewers access simultaneously
 - Multimedia = text, graphics, animation, audio, video
 - Streaming media
 - Gold standard
 - View content without downloading
 - Plug-ins versus Java applets
- Two Delivery Modes
 - Internet
 - Institutional network (hospital intranet)



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RATIONALE

- Defining the Problem
 - ↓ attendance at live presentations
 - Location barriers
 - Scheduling barriers
 - Inability to attend ↓ quality of work life

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OBJECTIVES

- Goals
 - To enhance access to CPE content
 - Overcome location and scheduling barriers
 - To record live presentations
 - Streaming media format
 - Internet and hospital network

SOFTWARE CRITERIA

- Ease of use
- Low technical expertise
- Convert PowerPoint™ to streaming media
- Real-time audio recording
- Simultaneous audio and video file synchronization
- Compatible with web server
- Compatible with networked hospital PC's

SOFTWARE ALTERNATIVES

Product Name	Manufacturer
Impatica for PowerPoint™	Impatica
PresenterONE™ SE	RealNetworks
QuickTime Pro™	Apple
MS Windows Media Technologies™	Microsoft
MS Producer for PowerPoint™	Microsoft
MS PowerPoint™	Microsoft

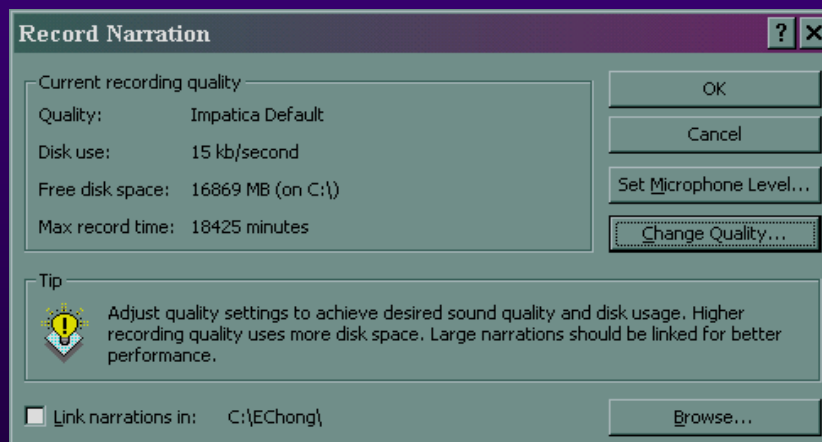
SOFTWARE SELECTION

- Impatica for PowerPoint™
 - Platform-independent
 - Java-based
 - Plug-in free
 - 95% compression

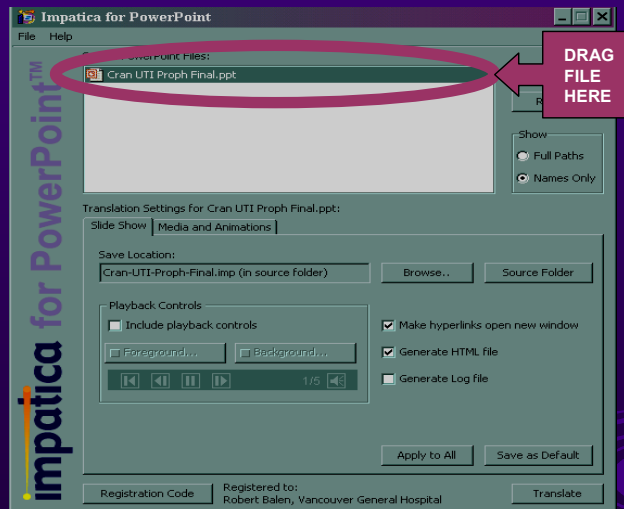
CONTENT CREATION

- PowerPoint™ 97 or 2000
- Live Audio Narration
 - Recorded in real time
 - Tie-clip microphone
 - “Record narration” function in PowerPoint™

CONTENT RECORDING



CONTENT CONVERSION



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CONTENT VIEWING

- Internet
 - <http://www.vhpharmsci.com>
 - Accessible worldwide
- Hospital network
 - “Presentations” folder
 - Shared directory
- Playback Testing



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“There are three kinds of death in this world. There's heart death, there's brain death, and there's being off the network.”

– *Guy Almes*

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WEB-BASED ACCESS

The screenshot shows the Pharmaceutical Sciences website interface. At the top, there is a navigation menu with links: [Home], [About Us], [Calendar], [Career Opportunities], [D&T Newsletter], [Cumulary], [Infusion Program], [Informatics Program], [Parenteral Manual], [People], [Policies], [Residency Program], [Clinical Drug Research Program], [Research & Publications], [Resources], [Contact Us].

Below the navigation menu is the "Drug & Therapeutics Newsletter" section, featuring articles from May 2002, including drug reviews for Itracozole/Valacyclovir, Clarithromycin/Transdermal estrogen, Oral acyclovir to valacyclovir interchange, Military pharmacists retraining, and Revised drug administration policies.

The "What's New?" section contains several updates:

- Pharmaceutical Sciences presentations online via streaming media (new feature May 2002)
- D&T Newsletter May 2002 issue
- Parenteral Drug Therapy Manual Online, Updated May 2002
- Looking for a change in career? Check out the Career Opportunities page.

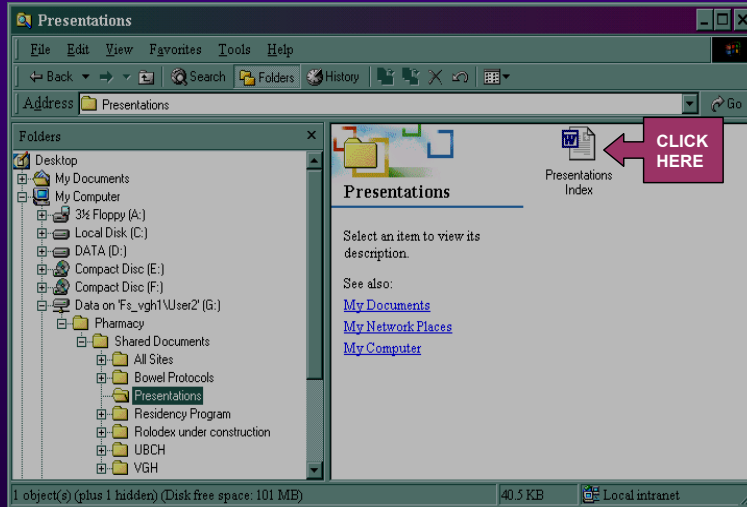
 A red circle highlights the link "Parenteral Drug Therapy Manual Online" in the "What's New?" section, with a red arrow pointing to a "CLICK HERE" button.

At the bottom right of the screenshot, it says "Last updated: May 23, 2002".

<http://www.vhpharmsci.com>

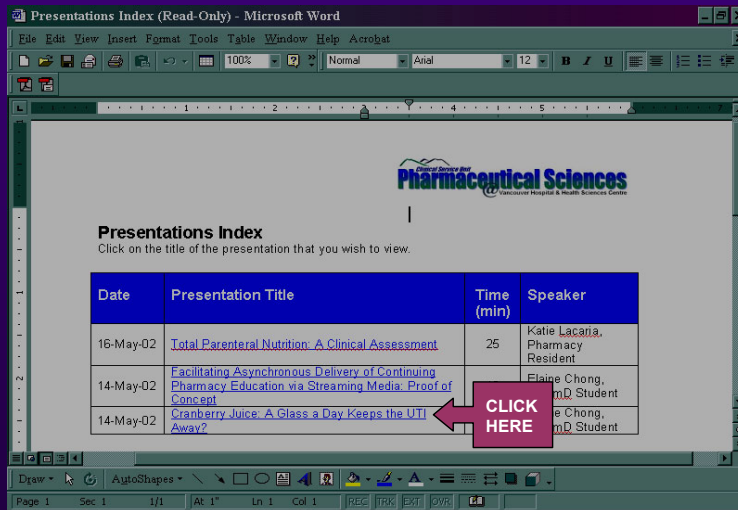
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NETWORK ACCESS



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NETWORK ACCESS



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STREAMING MEDIA



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RESULTS

- Live Presentation Recordings n=15
- User Response
 - Playback testing successful
 - Favourable feedback
 - Access during breaks
 - Fast-forward ability useful
 - Formal evaluation to follow

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DISCUSSION

- Limitations
 - No Information Systems support
 - Purchase of audio headsets
 - Baseline technical knowledge required
 - Viewer and presenter guidelines
 - Financial considerations
 - Software, web server, labour costs

CONCLUSIONS

- Goals Achieved
 - Enhanced access to CPE content
 - Removal of location and scheduling barriers
 - Process to record live presentations
 - Streaming media format
 - Internet and hospital network

FOR MORE INFORMATION

- Publication
 - Balen R, Chong E. Maximizing your continuing education yield: incorporating streaming media into your oral presentations. J Inform Pharmacother 2003;12:500. Available at: www.informedpharmacotherapy.com
- PPC Poster
 - Wednesday 05 February 2003

ACKNOWLEDGEMENTS

Dr. Robert Balen
Dr. Peter Jewesson
Dr. Mary Ensom

Apotex PACE



WINTER ON THE WEST COAST

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