

Web Lecture

Archiving System

for Professional

Society Meetings

University of Michigan

American Physical Society

NSF Proposal 0333580

Project Team

- **Homer A. Neal** (PI)
 - Professor, University of Michigan High Energy Physics
- **Alan Chodos** (Co-PI)
 - Associate Executive Officer, American Physical Society
- **Charles Severance** (Co-PI)
 - Research Scientist, UM Media Union
- **Shawn McKee** (Co-PI)
 - Research Scientist, UM High Energy Physics

Project Team

- **Jeremy Herr** (Project Manager)
 - Project Associate, University of Michigan High Energy Physics
- **Cang Ye** (Engineer)
 - Research Scientist, UM Robotics Lab
- **Robert Ball** (Engineer)
 - Research Scientist, UM High Energy Physics

Pre-meeting Scheduling

ATLAS Software Workshop (September 20th 2004) - Mozilla

Chairperson: **Ketevi Assamagan**
Location: CERN, telephone +41 22 767 7000
Room: 304-1-001/B

Time	Topic	Chairperson
14:00	Introduction (15') (transparencies)	Assamagan, K (BNL)
14:15	AOD Builders after 9.0.0 (15') (transparencies)	Cranmer, K (University of Wisconsin)
14:30	Summary of General and Special Tools (15') (transparencies)	Maeno, T (CERN)
14:45	Status of B-Tagging in AOD (15') (transparencies)	Wildauer, A (CERN)
15:00	B-Physics Examples on AOD (15') (more information)	Catmore, J
15:15	Selection, Filter Tools (15') (miscellaneous files, transparencies)	Binet, S (Clermont-Ferrand)
15:30	Discussion (1h00')	All
	• IParticle Interface & ParticleBase (20')	
	• Do we need IParticleContainer? (miscellaneous files, transparencies)	Calafiura P
	• symLink (20')	
	• CompositeParticle Class (20')	

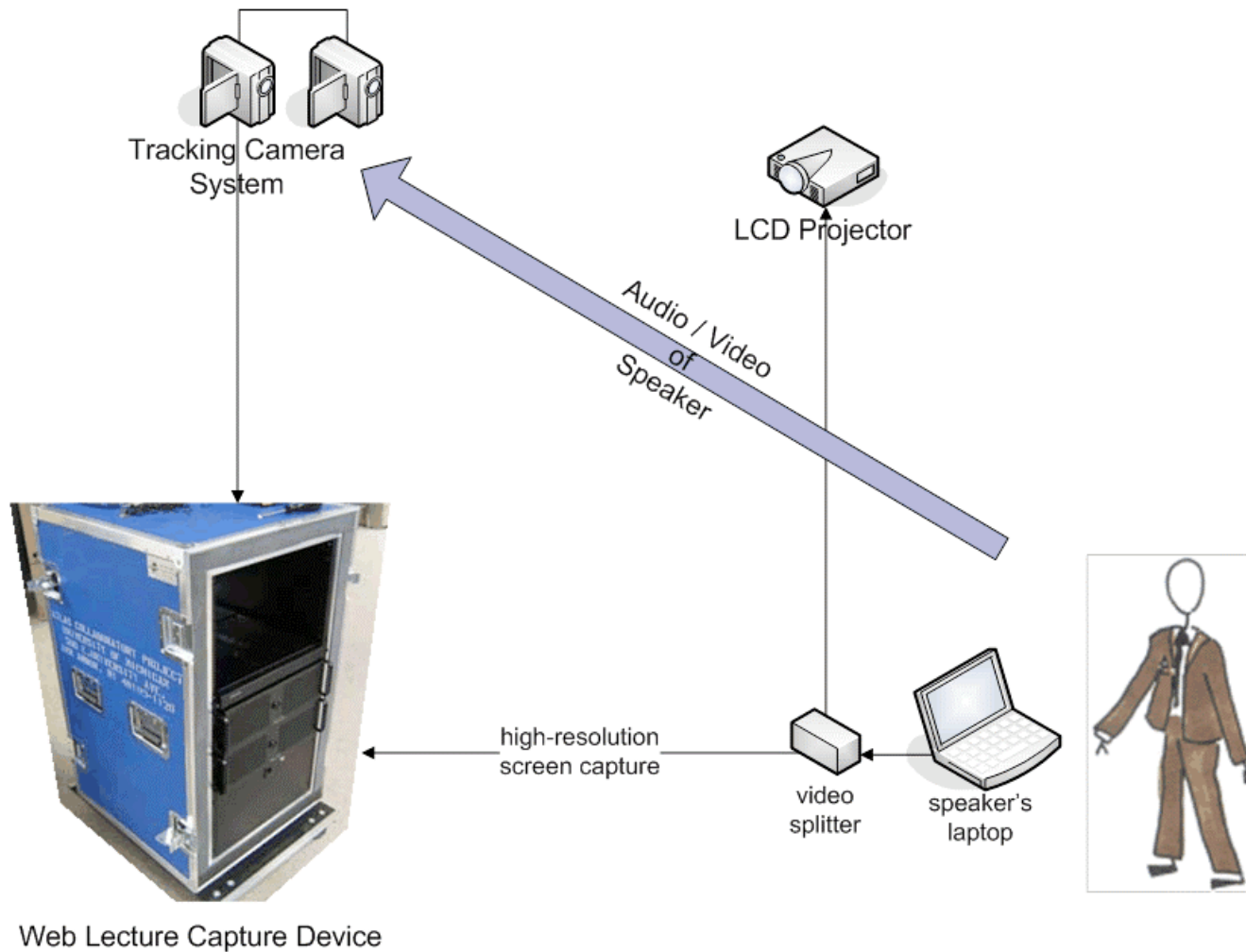
Distributed Analysis Working Group (16:30->19:00)

Chairperson: **David Adams**
Room: 104-R-B09

Time	Topic	Chairperson
16:30	ADA overview (30') (more information)	D. Adams
17:00	GANGA (ADA user interface) (20') (transparencies)	K. Harrison
17:20	ADA Transformations (20') (transparencies)	C. Haeberli
17:40	ADA catalogs in AMI (20') (transparencies)	S. Albrand

- Initial metadata entry describing each presentation takes place here

Capture and Processing



Camera Tracking System

What Is Needed

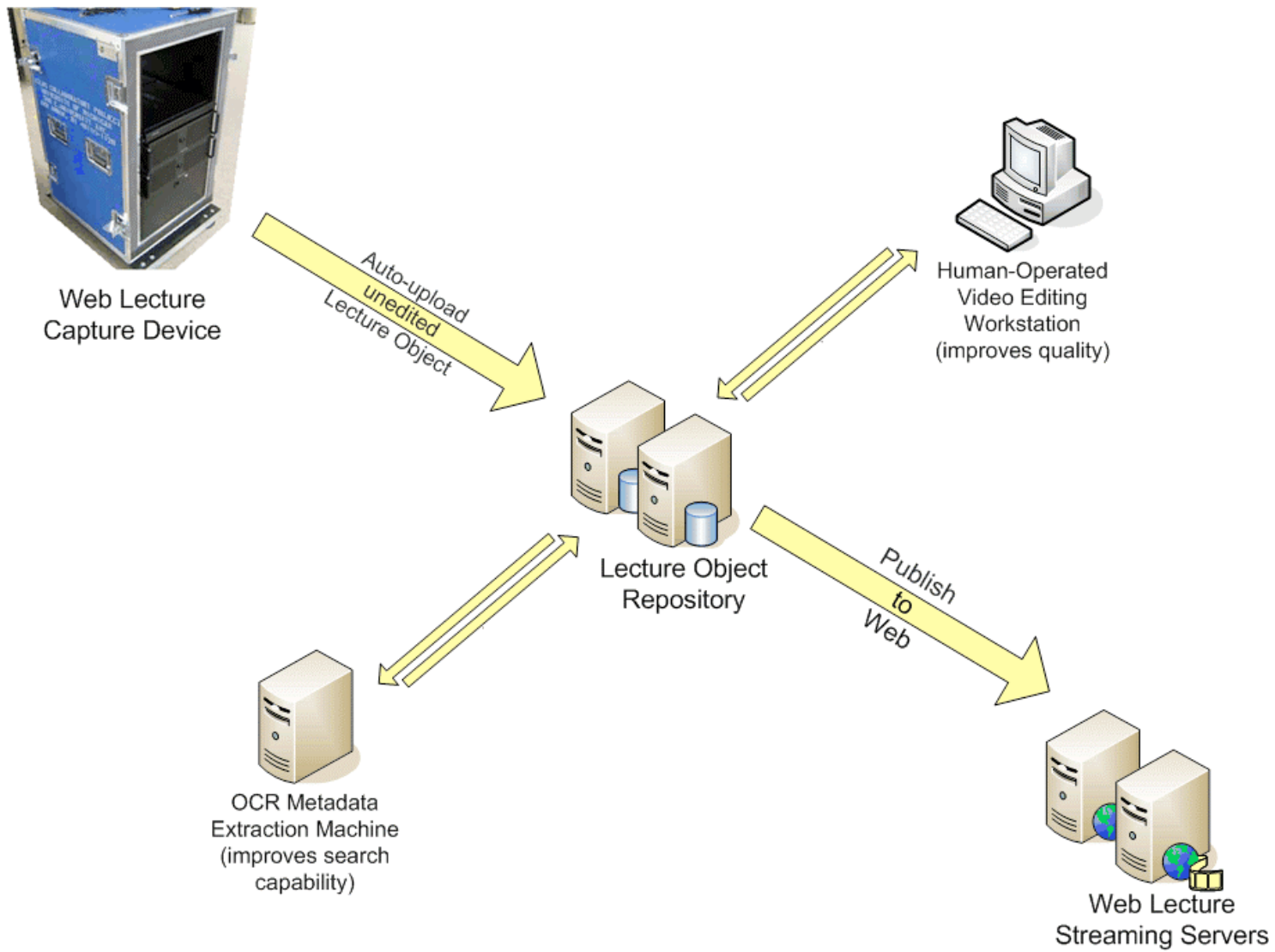
- Automated tracking/videotaping system to replace human camera operator
- Portable
- Inexpensive
- Robust
- Runs without expert intervention
- Little or no calibration required

Tracking Camera System

What We Propose

- **First attempt:**
 - Purchased WiFi-based BlueSoft tracking system
 - Wrote software to read location information and drive PTZ video camera
 - Tested in several locations, including Denver APS Conference
 - Concluded that BlueSoft tracking system is not accurate enough, and set-up/calibration is too difficult.
- **Second attempt:**
 - Consulted with tracking experts at General Dynamics in Ann Arbor, who suggested a similar system to one used by Boeing for their airplane-building robots (IR-based)
 - Hired a researcher from the UM Robotics Lab with extensive experience in visual tracking.
 - Purchased inexpensive IR PTZ camera and reflective tags, and will begin testing system in early 2005.

Archiving



Lecture Object

What Is Needed

- A global standard for archiving multimedia presentations
- A data object containing audio, video, image and document files
- Rich metadata defining:
 - Timing and technical information
 - Basic digital library search terms
 - Extensive search terms extracted with OCR from images and speech-to-text from audio track
 - Provenance and quality rating information
- Longevity and Availability

Lecture Object

What We Propose

- We will draft and release a Lecture Object standard and host a workshop for invited experts.
- We will define a data object using MPEG-4, JPEG, and other widely accessible, open formats.
- We will define a metadata file using RDF/XML, Dublin Core, Learning Object Metadata and other standards, to describe technical information and extensive search metadata.
- Our use of high-resolution media files and our adherence to recognized standards will enable Lecture Objects to remain useful far into the future

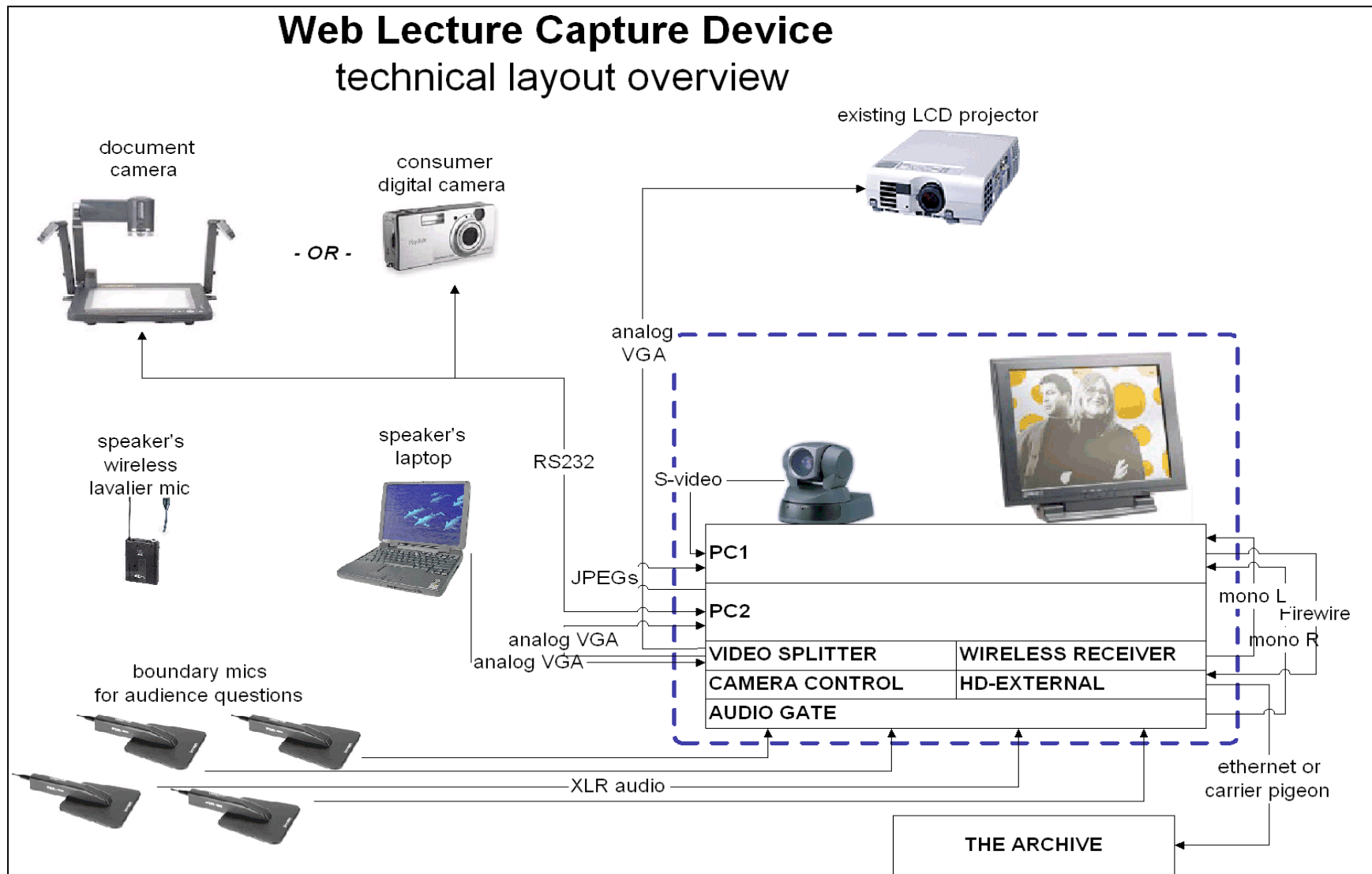
Web Lecture Available

- Any publishing format possible, e.g.
 - Real Player
 - QuickTime
 - Windows Media Player
 - others
- User can:
 - Watch streaming lecture online
 - Download web lecture locally
 - Download Lecture Object
 - Search on any term found anywhere in metadata, slides, audio
- Monitor web logs for usage information

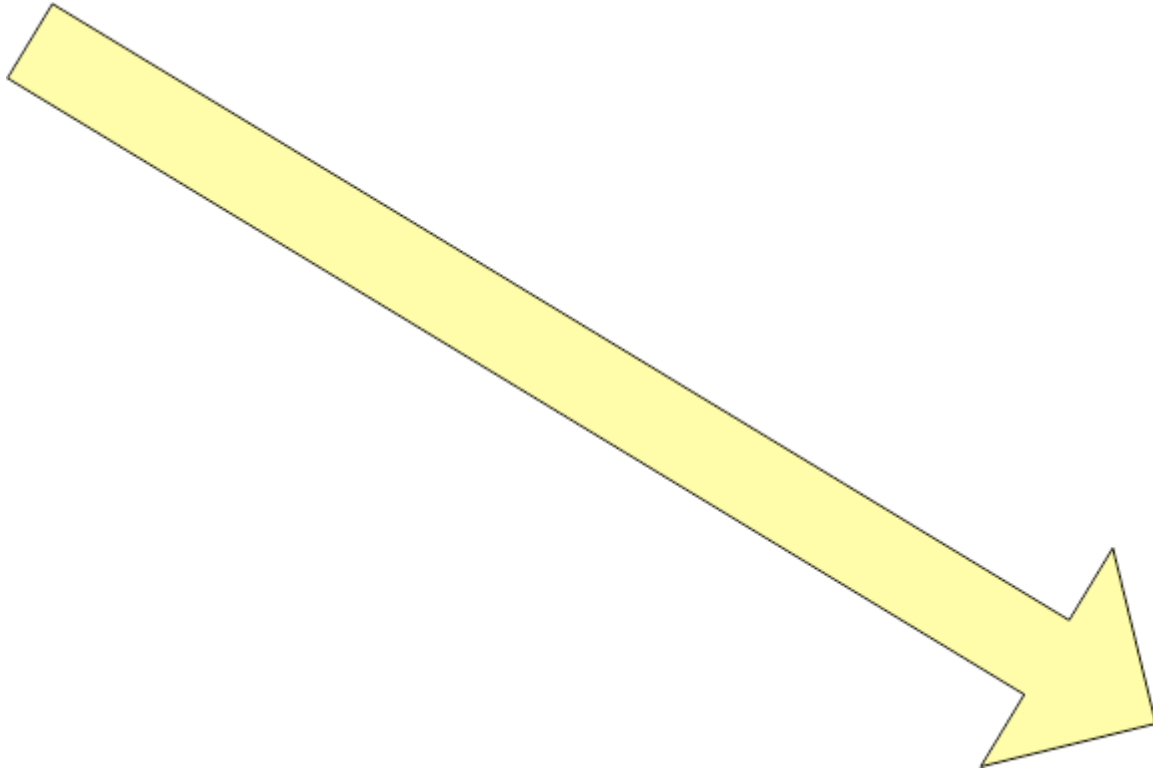
Trials/Milestones

- September 2002, Boston
 - APS Conference: Opportunities in Biology for Physicists
 - Manpower: 3 people, published all talks within 2 weeks
- January 2004, San Diego
 - APS Conference: Opportunities in Biology for Physicists
 - Manpower: 2 people, published all talks within 24 hours using WLCD Prototype #1
- April 2004, Denver
 - APS Conference: Opportunities in Biology for Physicists
 - 3 people tested WiFi-based tracking system (BlueSoft), recorded/published all talks within 24 hours using WLCD Prototype #2
- September 2004, Geneva, Switzerland
 - ATLAS Software Tutorials at CERN
 - 1 person recorded/published tutorials within 1 week

WLCD Technical Diagram



Poster Art: Timeline Arrow



Poster Art:

