

# DC Regional Fedora Users Meeting

***Short Report on Other Fedora Usage***  
**VITAL Update:**  
**Streaming Media & Authority Control**



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# Customer Projects

- a. Virginia College of Osteopathic Medicine
- b. Kansas City Public Library
- c. Queens Library
- d. Enhanced Authority Control

# Customer Projects

## a. Virginia College of Osteopathic Medicine

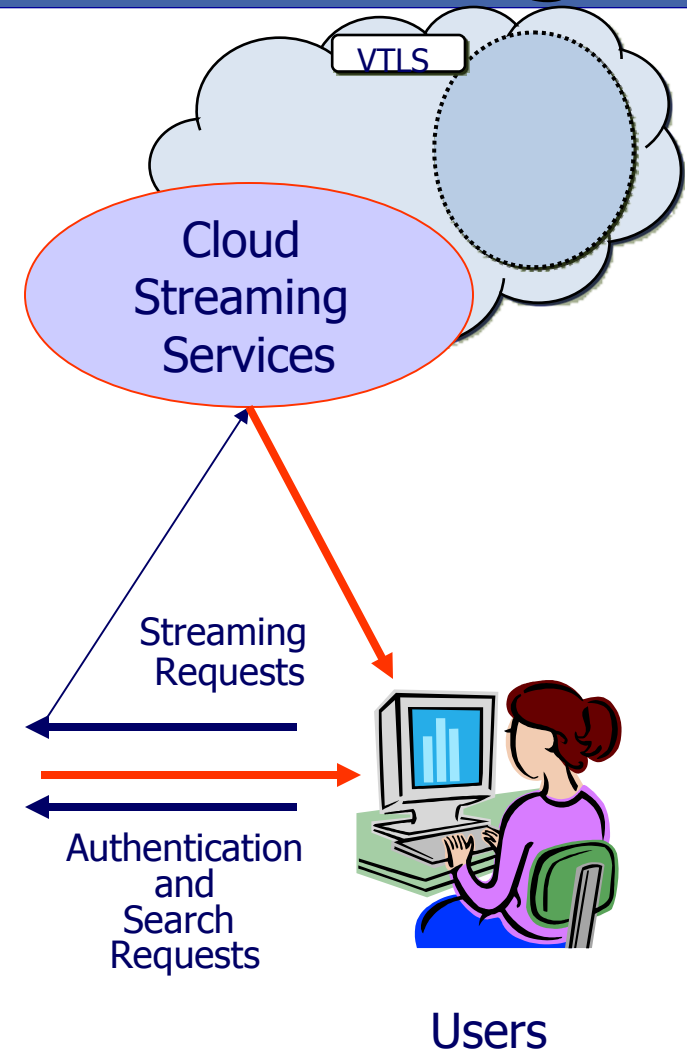
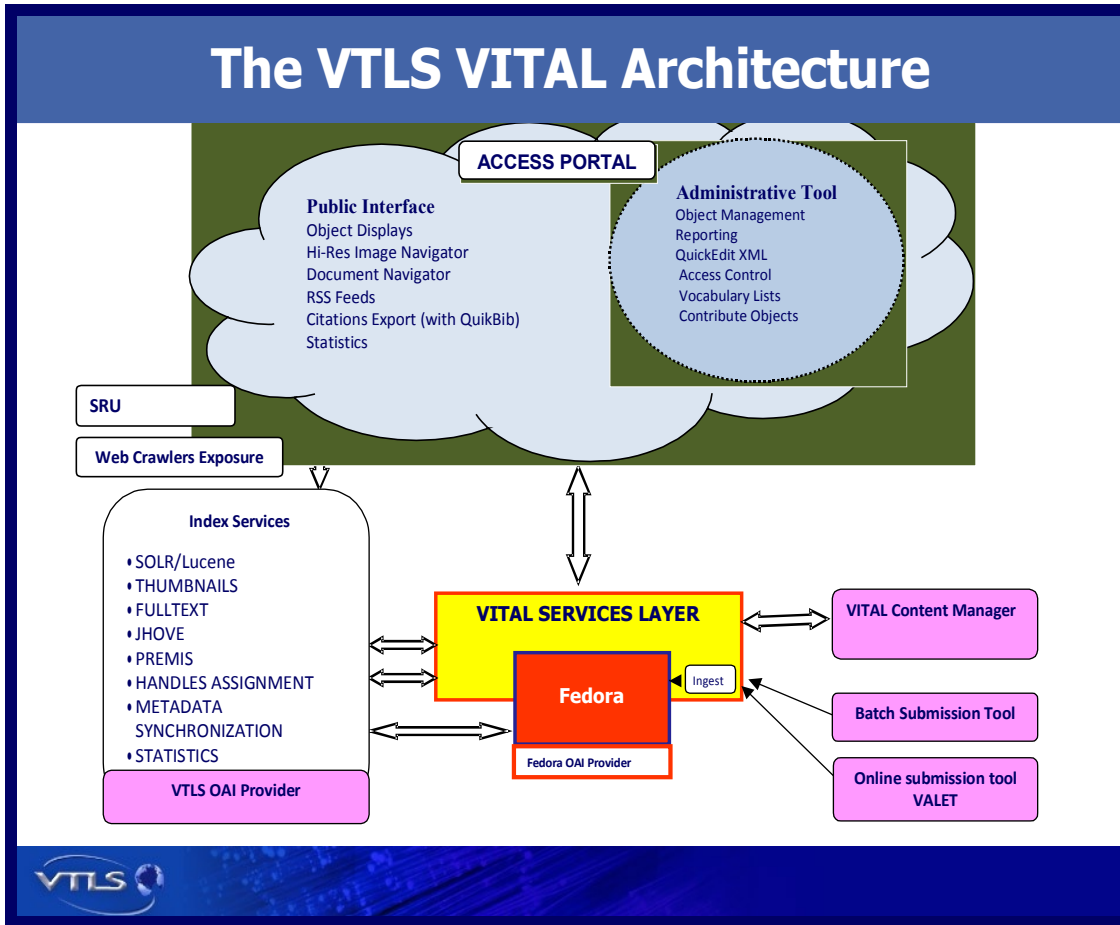
- Creating VCOM-TV
- Recording Lectures for students to play back
- Adding extras for students to watch in addition to class
- Future: Pay-for-access to videos

## b. Kansas City Public Library

## c. Queens Library

## d. Enhanced Authority Control

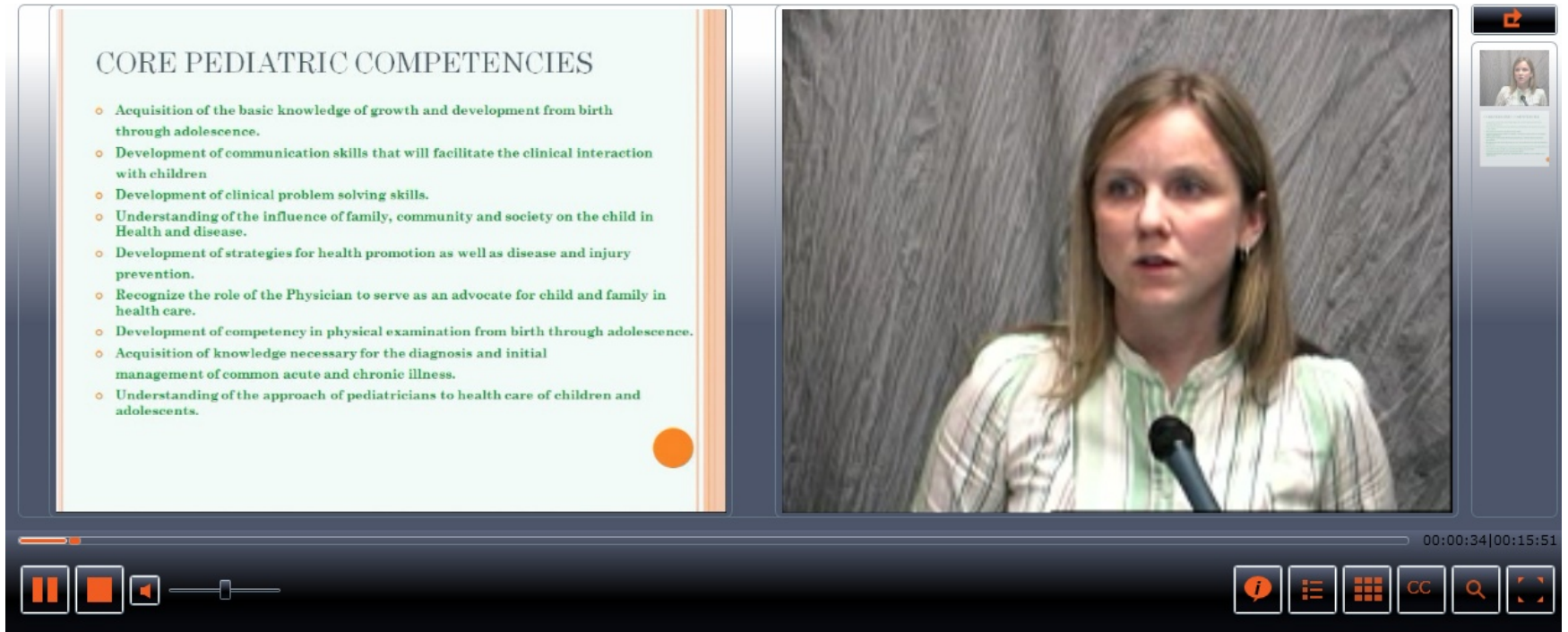
# VITAL : Using Cloud-Based Streaming



# The Birth of VCOM **TV**

- The program started 15 months ago
- Customer: The Edward Via Virginia College of Osteopathic Medicine (VCOM) in Blacksburg, Virginia
- Goal: to create an effective teaching and learning environment for medical students
- Within one year
  - the content increased tenfold
  - usage increased 800-fold
  - More than 1,000 different lectures are now available

# An example of VCOM TV recording

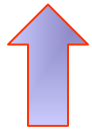


The screenshot displays a VCOM TV recording interface. On the left, a presentation slide titled "CORE PEDIATRIC COMPETENCIES" lists ten bullet points. On the right, a video feed shows a woman speaking into a microphone. The interface includes a progress bar at the bottom with a timestamp of 00:00:34|00:15:51, and various control icons for play, stop, volume, and navigation.

**CORE PEDIATRIC COMPETENCIES**

- Acquisition of the basic knowledge of growth and development from birth through adolescence.
- Development of communication skills that will facilitate the clinical interaction with children
- Development of clinical problem solving skills.
- Understanding of the influence of family, community and society on the child in Health and disease.
- Development of strategies for health promotion as well as disease and injury prevention.
- Recognize the role of the Physician to serve as an advocate for child and family in health care.
- Development of competency in physical examination from birth through adolescence.
- Acquisition of knowledge necessary for the diagnosis and initial management of common acute and chronic illness.
- Understanding of the approach of pediatricians to health care of children and adolescents.

00:00:34|00:15:51



Play-stop-volume Controls



Navigation Controls

# The Creation Process

- The creation process uses a multi-channel, video recording system. Whereas the system supports more than two channels – only two are used.
  - One channel shows the faculty member and the other shows a PowerPoint (or any other activity – like lab experiments).
  - These channels are automatically synchronized, which allows students to "jump" around in the content from either channel as needed. It lets students navigate and review small portions of a lecture (for exam preparation) from anywhere using a standard browser.

# The Creation Process

- In addition to being a consistent teaching tool, the system is an effective learning tool.
- Students can review small portions of a lecture from anywhere using a standard browser.
  - enhanced exam preparation
- Except for the lecture preparation itself, the creation process is simple
  - after the first time, can be handled by the faculty member without any outside help.
- An operator loads the data into the institutional repository.

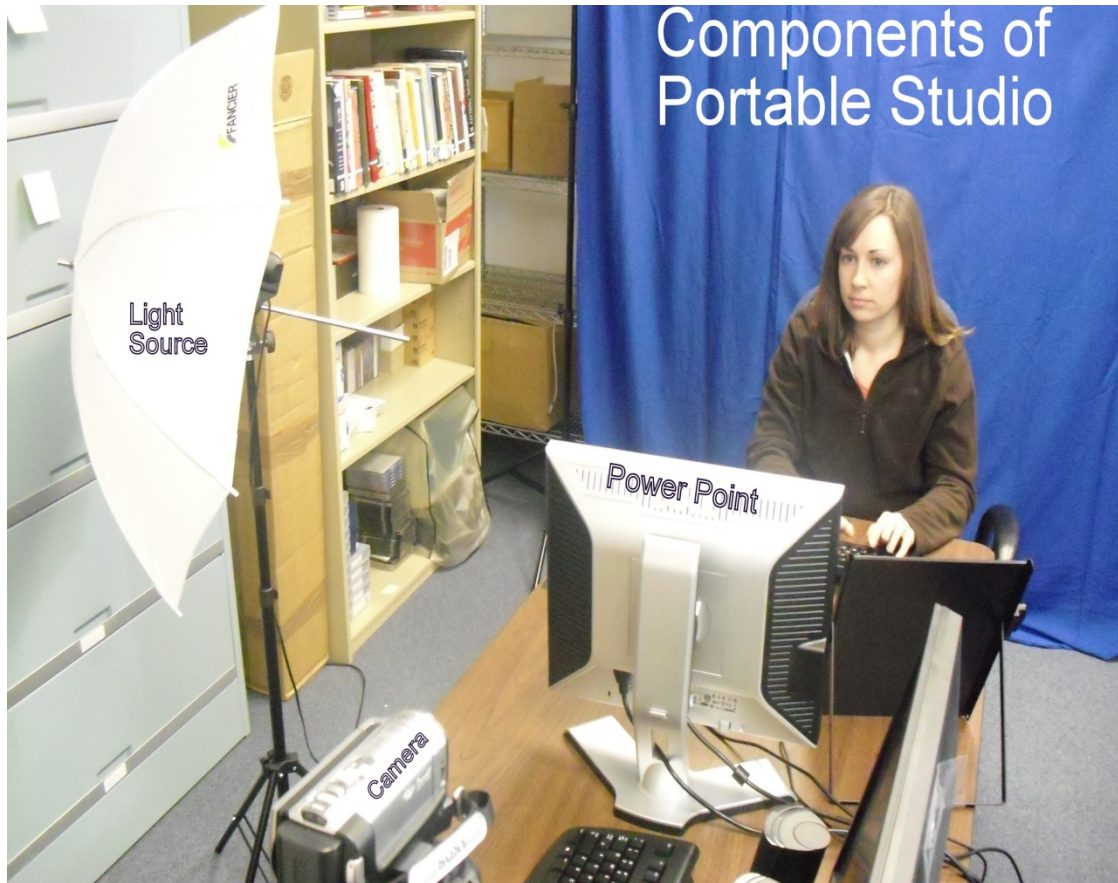


# Creation Process – Recording Options

There are three options available for recording:

1. Live in the classroom
2. Pre-recorded in a studio (controlled environment)
3. Pre-recorded using portable studio
  - This can be taken to a lab or an operation room
  - The first two options can be self-service
  - The third option requires operator assistance.
  - VCOM does all its own recordings

# Creation Process – Portable Studio



Components:

1. *Back Drop*
2. *Light Source*
3. *First Channel: Camera*
4. *Second Channel: Laptop*
5. *Synchronizer & Recorder*

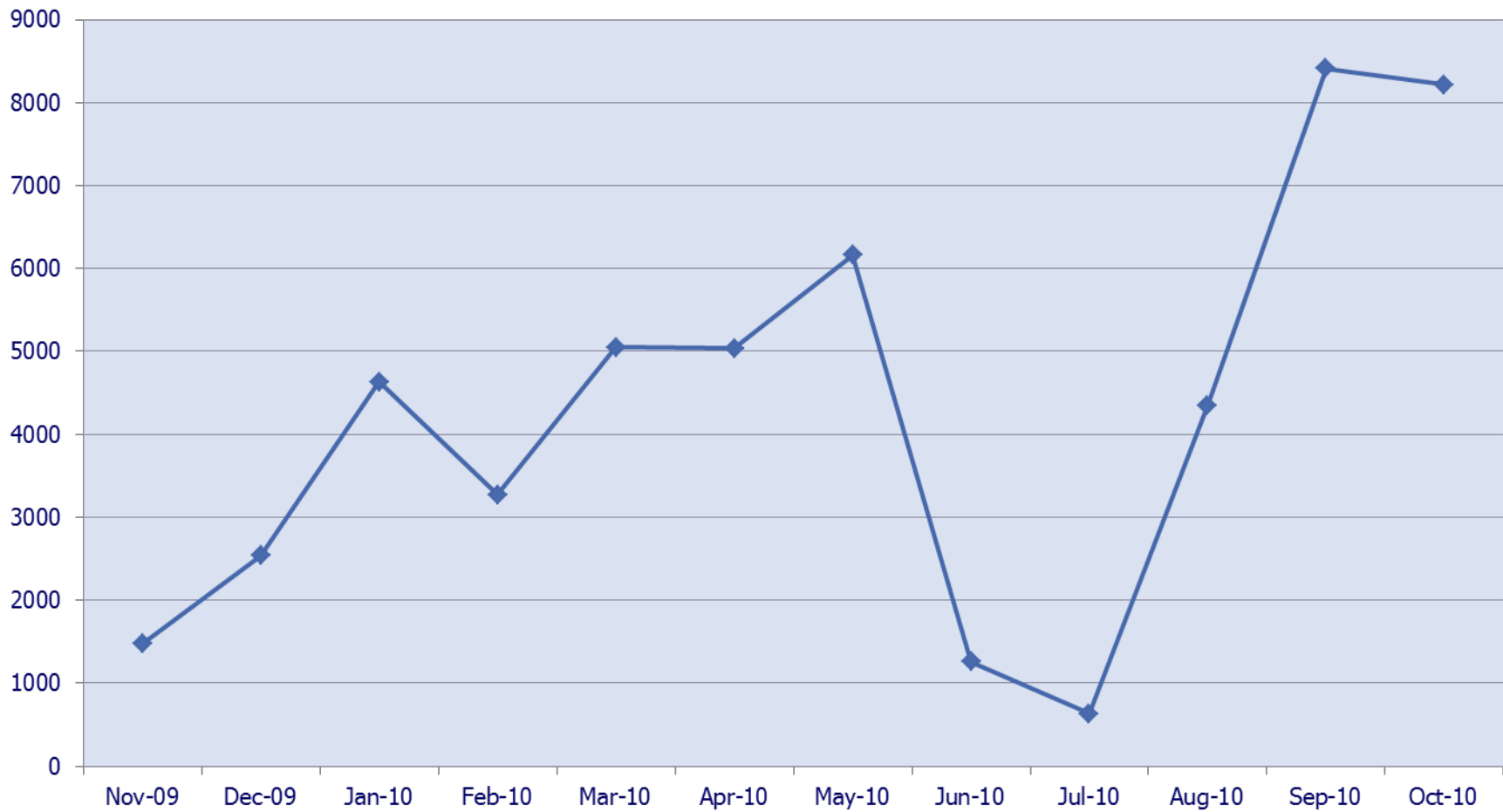
All this can be packaged on a single cart.

# Content Management

- The management process is simple
  - Completed recordings may be edited
    - *This step is optional*
  - Created content is loaded into the VITAL repository and a metadata record created
    - *The content is immediately available to users*
  - The content is loaded to the cloud based streaming service provider
    - *metadata is kept locally*
  - Google analytics are set up to monitor usage
  - The normal VITAL/Fedora backup-recovery-version control features are invoked

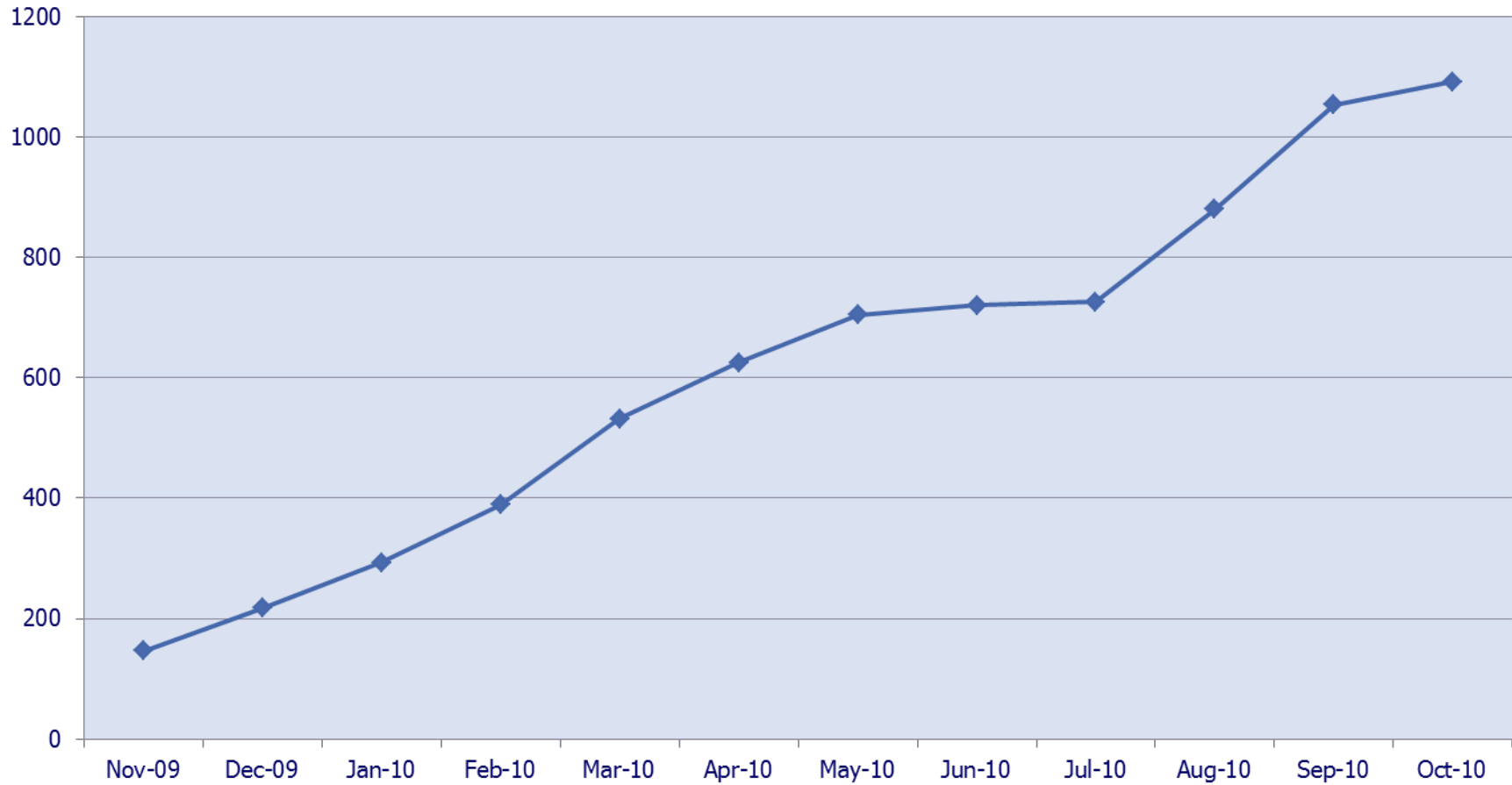
# Result : Tremendous Growth (1 of 3)

Visitors for VCOM TV



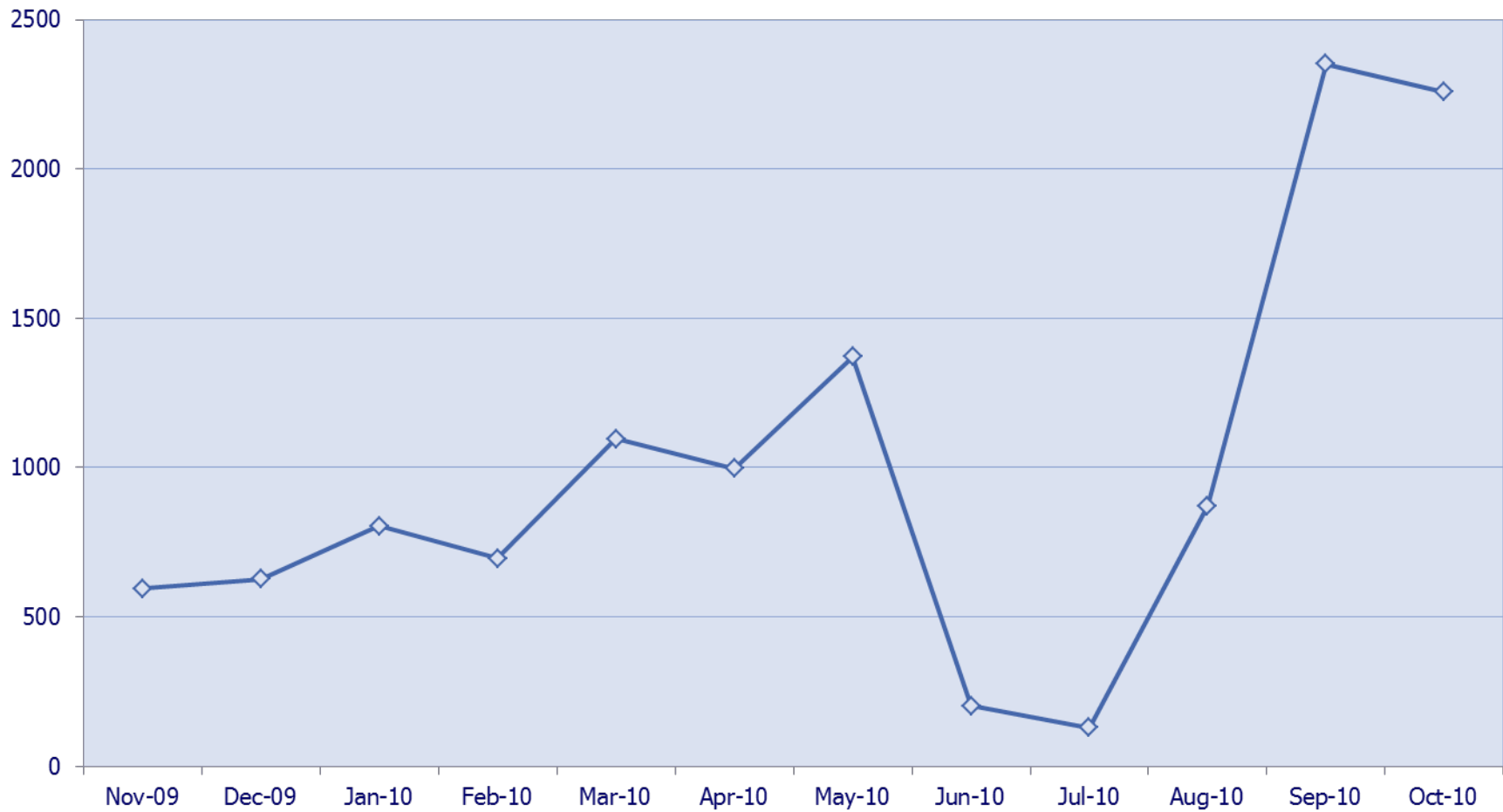
# Result : Tremendous Growth (2 of 3)

## VCOM *TV* Videos Online



# Result : Tremendous Growth (3 of 3)

## VCOM *TV* GB Transferred



# Customer Projects

- a. Virginia College of Osteopathic Medicine
- b. Kansas City Public Library
  - Using VITAL API + Drupal
  - Creating a “one-stop-shop” for all research about Kansas City
- c. Queens Library
- d. Enhanced Authority Control

# Customer Projects

a. Virginia College of Osteopathic Medicine

b. Kansas City Public Library

c. Queens Borough Public Library

- Creating a repository from archives
- Documenting natural, social, economic and political history of Queens, King, Nassau and Suffolk counties
- Using VITAL API + Drupal

d. Enhanced Authority Control



# VITAL+ Drupal

- **Three components**
  - **VITAL Web Service API**
  - **VITAL Services module (a Drupal module)**
  - **VITAL Web Display module (a Drupal module)**

# VITAL+ Drupal

- **VITAL Web Service API**
  - **Simple API that provides filtered FOXML**
- **VITAL Services module**
  - **Provides the communication infrastructure**
    - **Makes Drupal nodes of type 'vital' appear to contain FOXML**
    - **Makes the web services connection to VITAL**
    - **Utility functions**
    - **Drupal 'apachesolr' module integration**

# VITAL+ Drupal

- **VITAL Web Display module**
  - **Provides the data display infrastructure**
    - **Templates and preprocessing functions**
    - **These interpret and display data provided by the VITAL services module**

# Customer Projects

- a. Virginia College of Osteopathic Medicine
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# Authority Control - Overview

- Provides standard, consistent (“authoritative”) references in metadata
  - Allows more accurate search
  - Assists in accurate cataloging
- Traditional in Integrated Library Systems
- Librarians are used to it, want it in digital repositories also
  - Unlike traditional ILS, in a digital repository authority control must be extensible to *all* metadata datastreams in their various schemata

# VITAL Authority Control

- **Objects stored in Fedora**
  - **'repository' objects: objects dealt with by normal users**
  - **'authority' objects: special VITAL system objects**
    - **"special" because of how VITAL uses them**
    - **In all respects, they are regular Fedora objects**
    - **Managed by administrators**
    - **Only their effects are visible to normal users**

# VITAL Authority Control

- Authority Objects stored in Fedora
  - Have a specific content model
    - `vital-system:authorityCM`
  - Have a MADS datastream
    - The primary datastream for VITAL authority information
- Can have other authority metadata datastreams
  - these can be synchronized with the MADS datastream during indexing

# VITAL Authority Control

- **Authority Objects in VITAL**
  - **can be created from authority metadata in MADS or other formats**
    - **transformed into MADS when indexed**
    - **just need to provide XSLT to transform to MADS**
    - **VITAL comes with MARCXML to MADS transformation**



# VITAL Authority Control

- VITAL Authority Control
  - indicated in the RELS-EXT (bidirectional)
  - metadata rewritten in controlled metadata datastreams
    - *facilitates portability*

# Authority Control Challenges

- authority information is stored MADS -- but repository object metadata is stored in anything *but* MADS
- enormous mismatch between the MADS XSD and its intended semantics
  - no way to tell from a MADS document what it's about
  - An <authority> element may contain *all* of <name>, <titleInfo>, <topic>, <temporal>, <genre>, <geographic>, <hierarchicalGeographic>, <occupation>

# Authority Control Challenges

- An <authority> element may contain all of <name>, <titleInfo>, <topic>, etc.
- is it about Mark Twain, *Huckleberry Finn*, or Hannibal, MO?
  - traditional: 'Mark Twain' in <name>, other information in <note> field
  - problem: want to use real MADS markup so the data is machine readable

# VITAL Authority Control - Solution

- **Classify authority objects by 'authority type' based on specific attributes of the MADS data**
- **Out of the box, VITAL defines the "traditional" authority types (i.e., Name, Title, Name/Title, Subject, Genre, Geographic)**
- **Can be modified or extended by the customer**
- **Provides some organization to the madness**

# VITAL Authority Control - Solution

- VITAL provides an interface for authority object creation that enforces constraints beyond simple MADS 1.0 validity
  - single <mads> element
  - a <related> element must refer to an existing authority (or a "blind" authority is created dynamically)
  - an <authority> element cannot be a <variant> of an existing authority
- VITAL provides a powerful interface for merging authorities
- VITAL authority control is comprehensive and configurable (but optional!)

# VITAL Authority Control Options

- basic authority control of metadata
- authority control **with suggestions**
  - new authorities (based on ingested repository objects)
  - authority assignments to repository objects
- authority control **with automatic authority creation**
  - can be restricted to specific authority types
- authority control **with automatic authority assignment**
  - independent of automatic authority creation

# VTLS VITAL



- **Streaming media**
- **Drupal integration**
- **Authority control**

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