



# **Global Plaza Workshop**

## **Interworking**

**Enrique Barra Arias**  
**Agora Systems S.A.**

# Interworking



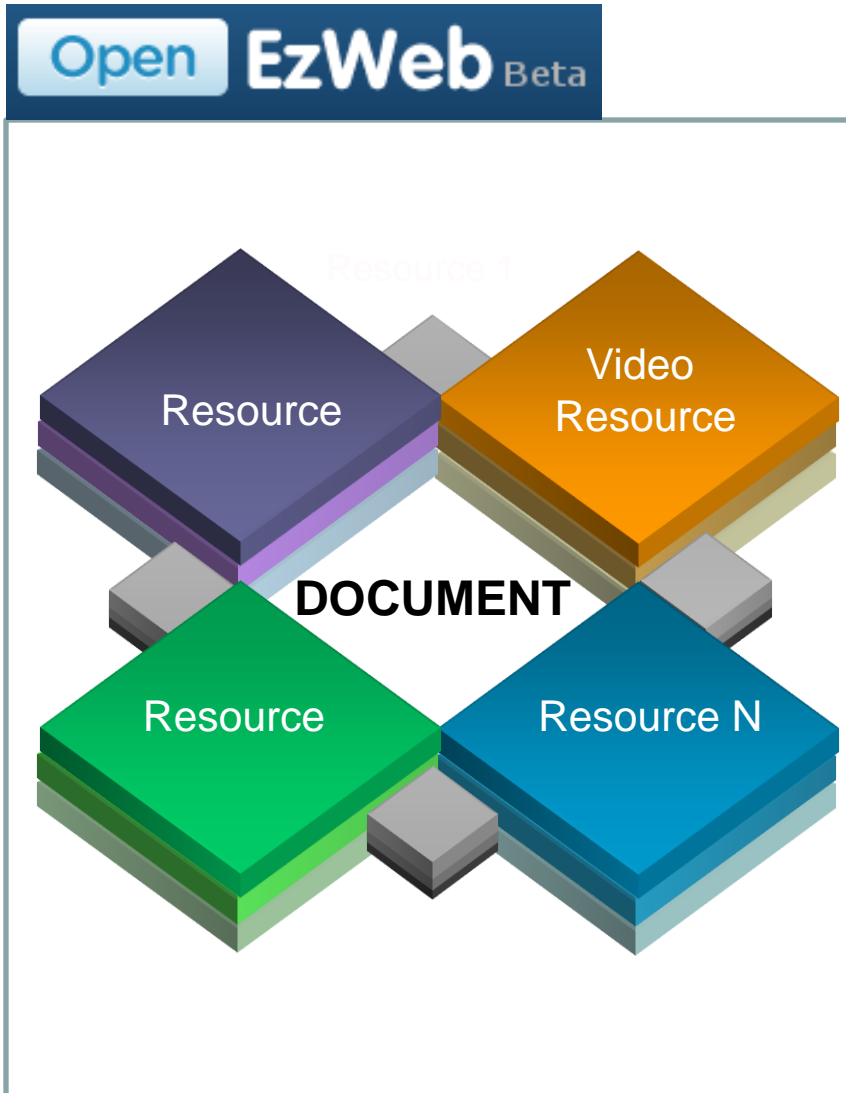
- **Export events to several formats**
  - SCORM package for LMS
  - iCalendar file for schedule management (also available for import)
  - PDF for document exchange
- **Metadata in the videos**
  - Format: Smil tiny
  - Adjust the starting and ending times in the recordings
  - Create playlists and access specific video fragments
  - Subtitles ...

# Interworking



- Video files format
  - Now: M4V container + H.264 and Speex codecs
  - Future: MP4 container + H.264 and AAC codecs
- REST
- Atom + RSS for content syndication
- SIP

# Example



← Webservice



# Result



**Open EzWeb** Beta    Añadir Gadgets    Conectar Gadgets    MyWorkSpace    Anónimo | Registrarse | ? X [Flags]

MyTab    Añadir Tab

### VCC Video Player (1)

Application: blazinq

**Towards an Integrated National Cyberinfrastructure**  
Colin Wright: Manager - Cyberinfrastructure

Logos: CHPC, Belief, SANREN, SA-VLDB/S, CSIR, science & technology, meraka.

Video progress: 00:06 / 14:22

### VCC-Video-Search (2)

vccTube Last Video Conferences

Pagina: 1 2 3 4 5

Buscar

EzWeb



# **Global Plaza Workshop**

## **Architecture and technologies**

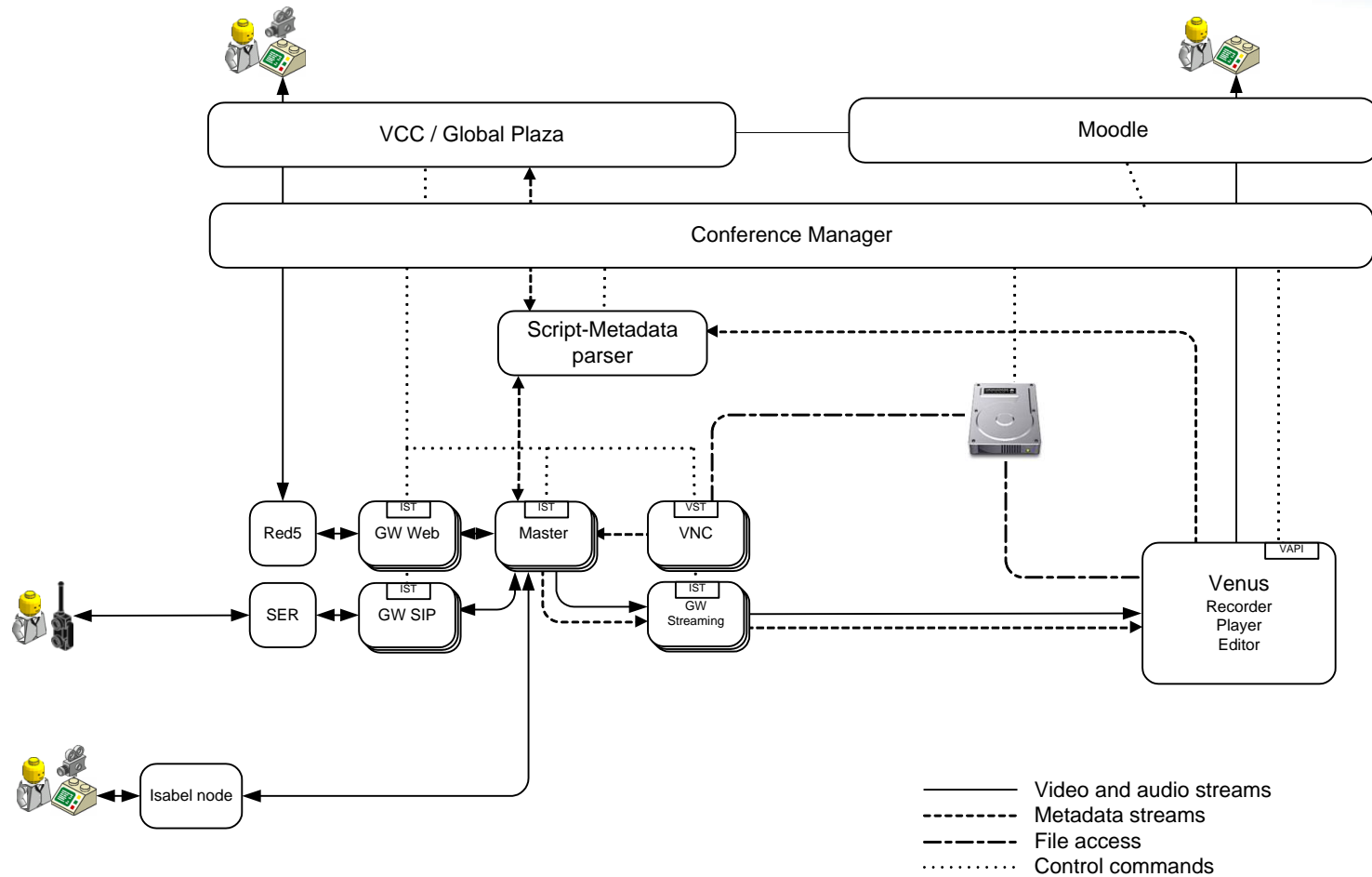
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# Content

- Architecture
- VCC Technologies
- Conference Manager
- Conference Manager Technologies
- Recording
- HTTPLive streaming



# Architecture

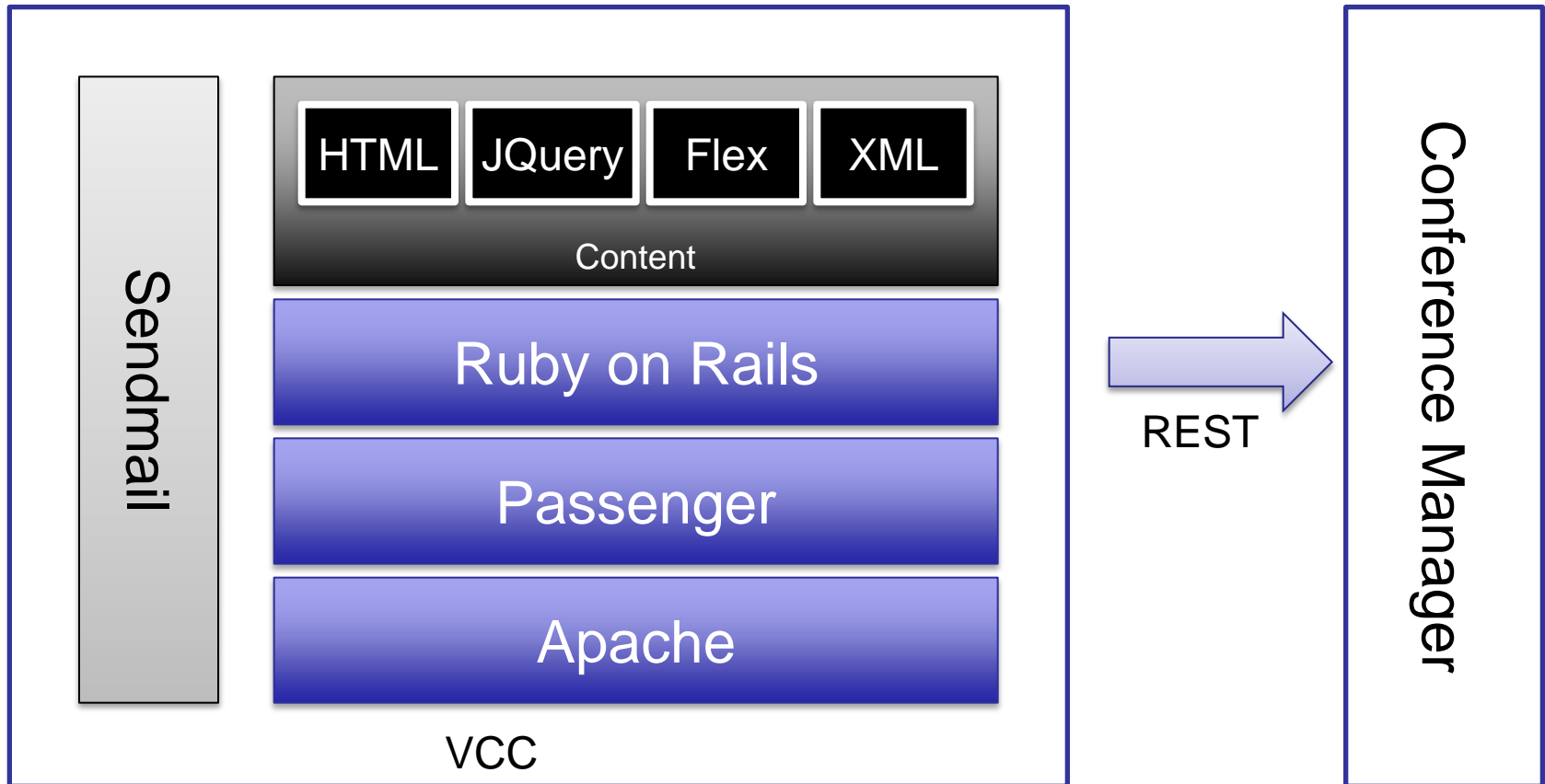


# Architecture – Conference Manager



- Videoconference sessions scheduler
- Start/Stop of Isabel resources:
  - Isabel Master
  - Isabel Web GW
  - Isabel Streaming GW
  - Isabel SIP GW
  - VNC server
- Real-time web streaming and participation
- Recording of multimedia sessions with Venus application
- Metadata information about sessions on recorded videos
- Publication of recorded sessions on the Web

# VCC Technologies

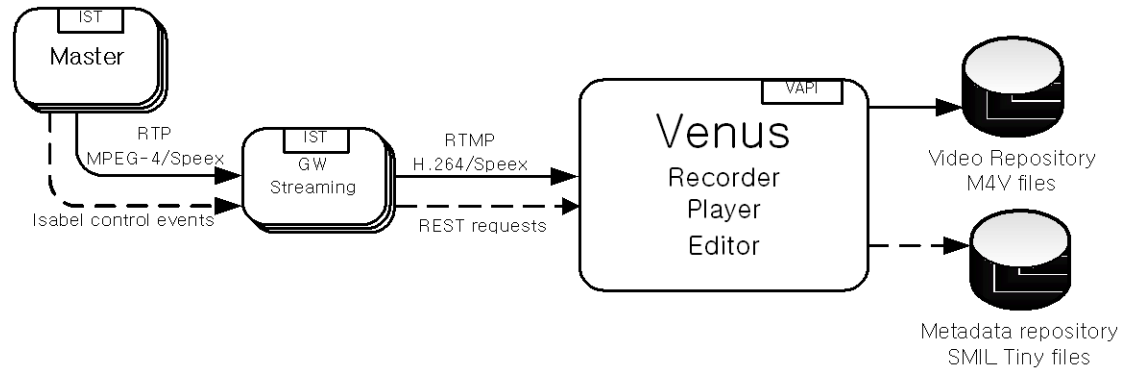


# Conference Manager Technologies



- Developed in Java
- Web streaming/participation
  - Real-Time Messaging Protocol from Adobe.
  - Web client: Adobe Flash Player.
  - RTMP server: Red5.
- SIP participation
  - Java SIP stack: MjSip.
  - SIP Proxy: SIP Express Router.

# Recording (I)

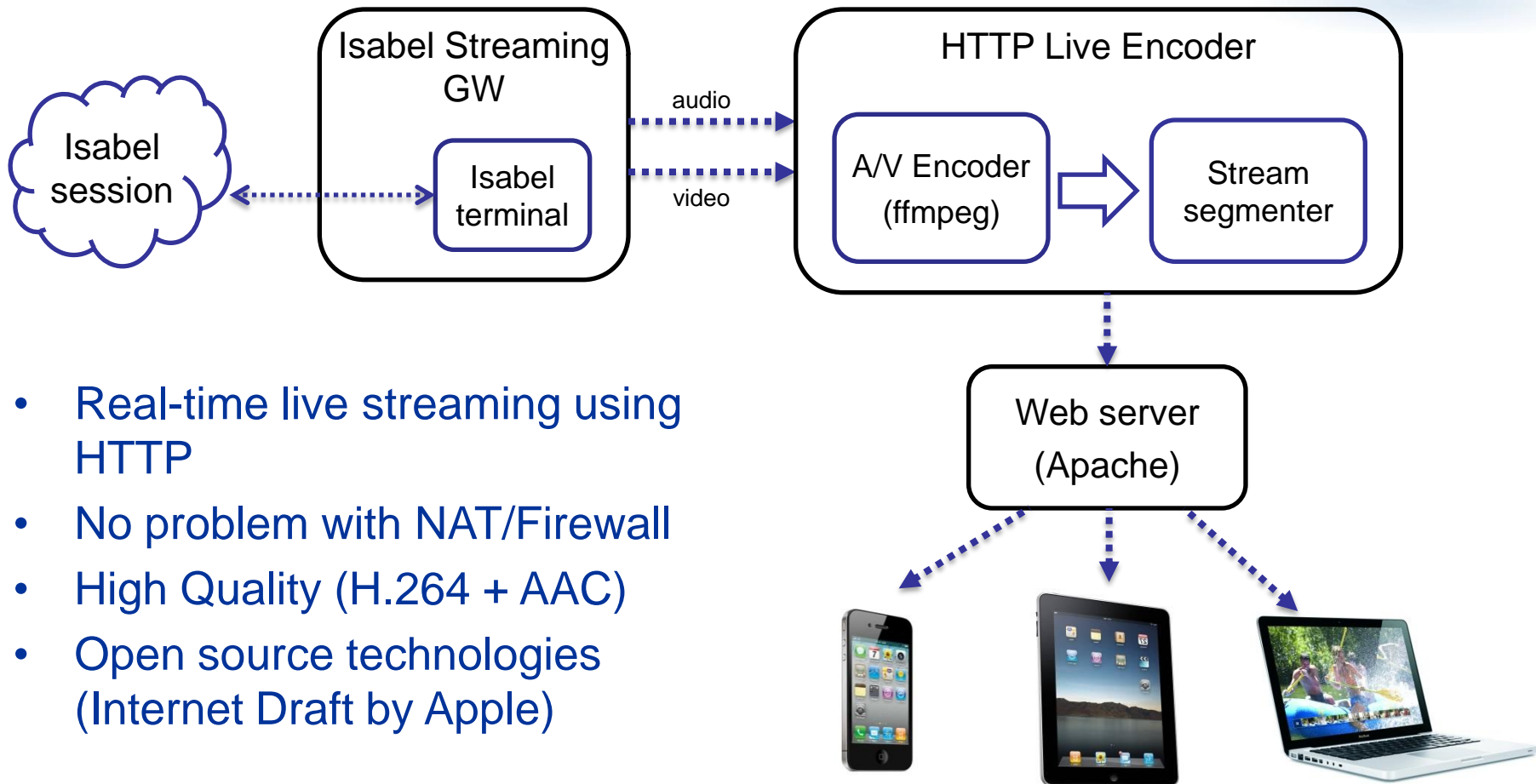


# Recording (II)



- **Multimedia**
  - Isabel:
    - Video: MPEG-4,H.264,...
    - Audio: Speex,GSM-32,...
  - GW Streaming:
    - Video: H.264
    - Audio: Speex
    - Format: M4V
- **Metadata**
  - Isabel:
    - Session control events
  - GW Streaming:
    - HTTP REST requests
  - Venus
    - SMIL 3.0 Tiny Profile

# HTTP Live Streaming





**Thank you for your attention**

**Questions?**

**Contact info:**

**Enrique Barra Arias**

**[enrique.barra@agora-2000.com](mailto:enrique.barra@agora-2000.com)**