



Università degli Studi di Salerno



*Unlimited Software*

*Visual 2008 – Industrial Experiences*

**An Architecture  
for Multimedia Content Publishing  
with GIS-based Retrieval Facility**

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# Goal

This work addresses the creation of a simple web architecture based on an **open source** framework capable to provide a means to publish and retrieve **multimedia content**, also with some facilities based on **data positioning**, associated with multimedia files and subsequent retrieval.



# Open Source Frameworks

To achieve our goal we have analyzed some literature proposals concerning multimedia content management systems available in the current scenario.

Among the possible solutions we restrict our choices to four frameworks:

- **ContentDM** (<http://www.contentdm.com>) (not open source)
- **DSpace** (<http://www.dspace.org>)
- **Fedora** (<http://www.fedora.info>)
- **WikiD** (<http://www.oclc.org/research/projects/wikid>)



# Frameworks analysis (1/2)

## Comparison concerning data support features

Feature	ContentDm	DSpace	Fedora	WikiD
Arbitrary Bitstreams	+	+	+	
Arbitrary Complex Object	+	+	+	+
Versioning			+	+
Locale Metadata Elements	+	+		+
Preservation Metadata		+	+	
Batch Input	+	+	+	-
Rich Metadata Searching	+	-	-	-
Full-text Searching	+	-		-

Legend : + good, - sufficient, **blank** = not present



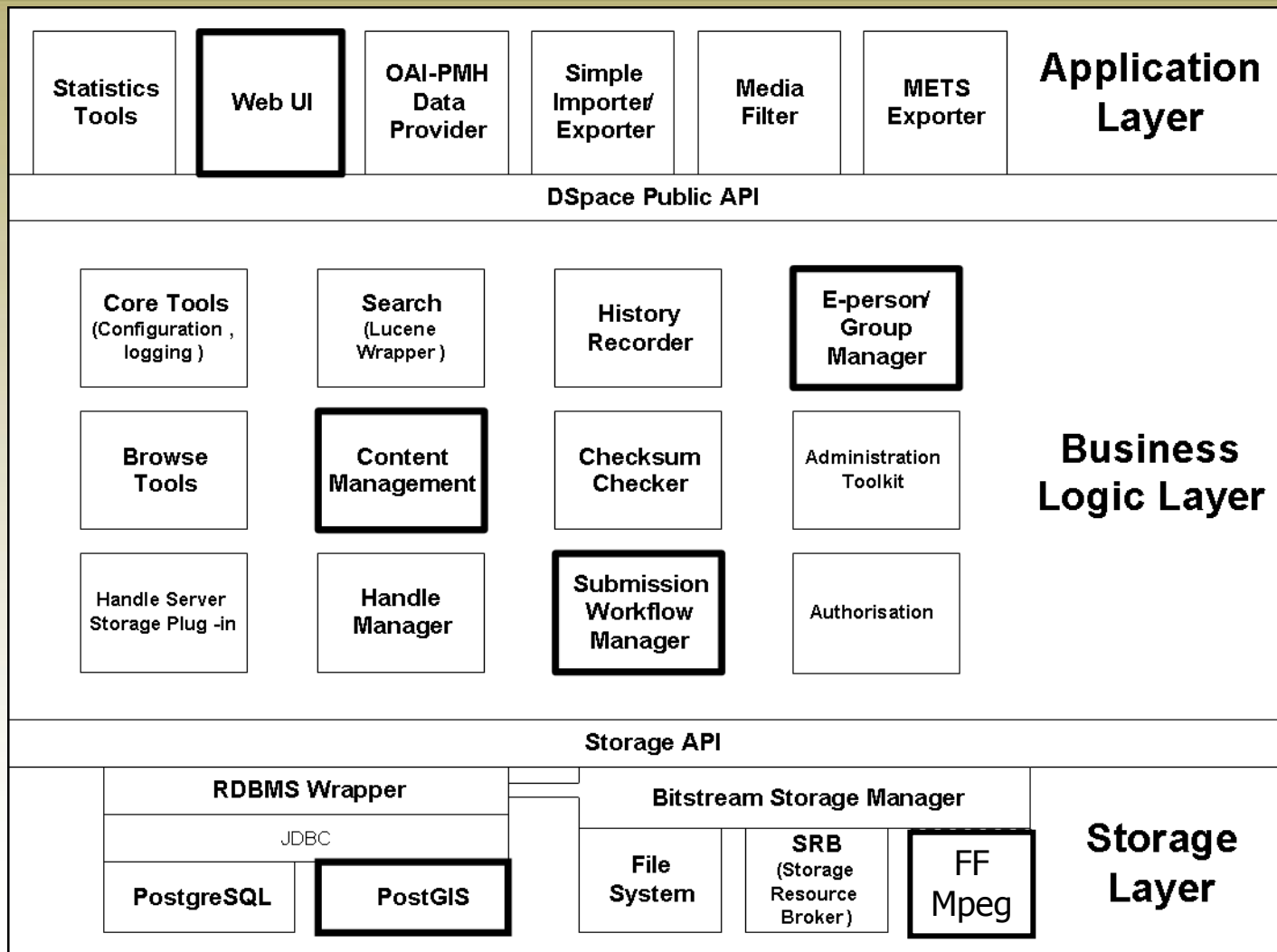
# Frameworks analysis (2/2)

## Comparison concerning user support features

Feature	ContentDm	DSpace	Fedora	WikiD
User Roles with Privileges	-	+		
Workflows		+		
Object Marshalling	+	+		
Arbitrary Bitstream Retrieval	-	-	-	
Arbitrary Object Retrieval			+	
Web Interface	+	+		+
Content Easily Integrated into Web Pages	+		-	+

Legend : + good, - sufficient, **blank** = not present

# Architecture layers overview



# Screenshots: Google Map geocoding

The screenshot displays a Google Maps interface with a satellite view of Positano, Italy. A red location pin is placed on Viale Pasitea, and a white information popup is open. The popup contains the following text:

**Address:**  
Viale Pasitea  
84017 Positano SA, Italy

Get directions: [To here](#) - [From here](#)  
[Search nearby](#) - [Save to My Maps](#)

Below the popup, a list of search results is visible. The first result is:

- title:** A day in Positano
- duration:** 2:15 min
- author:** Smith Robinson
- description:** A job in the town near Naples
- address:** Viale Pasitea, Positano, Salerno, Italy
- latitude :** 40.629290
- longitude:** 14.482938

A red dashed oval highlights the 'longitude' field and the 'view on Google Map' button below it.

Other search results include:

- title:** A day in Positano
- duration:** 35 sec.
- title:** TitoloABC
- duration:** 2:00 min.

The map interface includes a navigation sidebar on the left with zoom controls, a scale bar at the bottom left, and a map style selector at the top right (Map, Satellite, Terrain). A small inset map in the bottom right corner shows the location of Positano within the region of Salerno.



# Screenshot: detailed info window





# Conclusions

The architecture proposed has the following **advantages**:

- open source software
- efficient multimedia management
- GIS facilities (PostGIS based)
- .FLV format (streaming)
- customizable approval workflow

and some **issues**:

- little effort to gain web pages integration



**Questions ?**

**Thanks for your attention!**