

# Geo-Aware Digital Cultural Heritage

David Bearman  
Archives & Museum Informatics

NDAP International Conference  
Taipei, March 20, 2008

# Issues Facing 21st Century Museums

- Authority
- Ownership
- Accessible Collections
- Interpretation
- Audience
- Engagement

# Geo-Aware Opportunity



# Geo-Aware Opportunity

Geosynchronous Satellite



GPS Signal



# Geo-Aware Opportunity

Geosynchronous Satellite



GPS Signal



Cell Tower

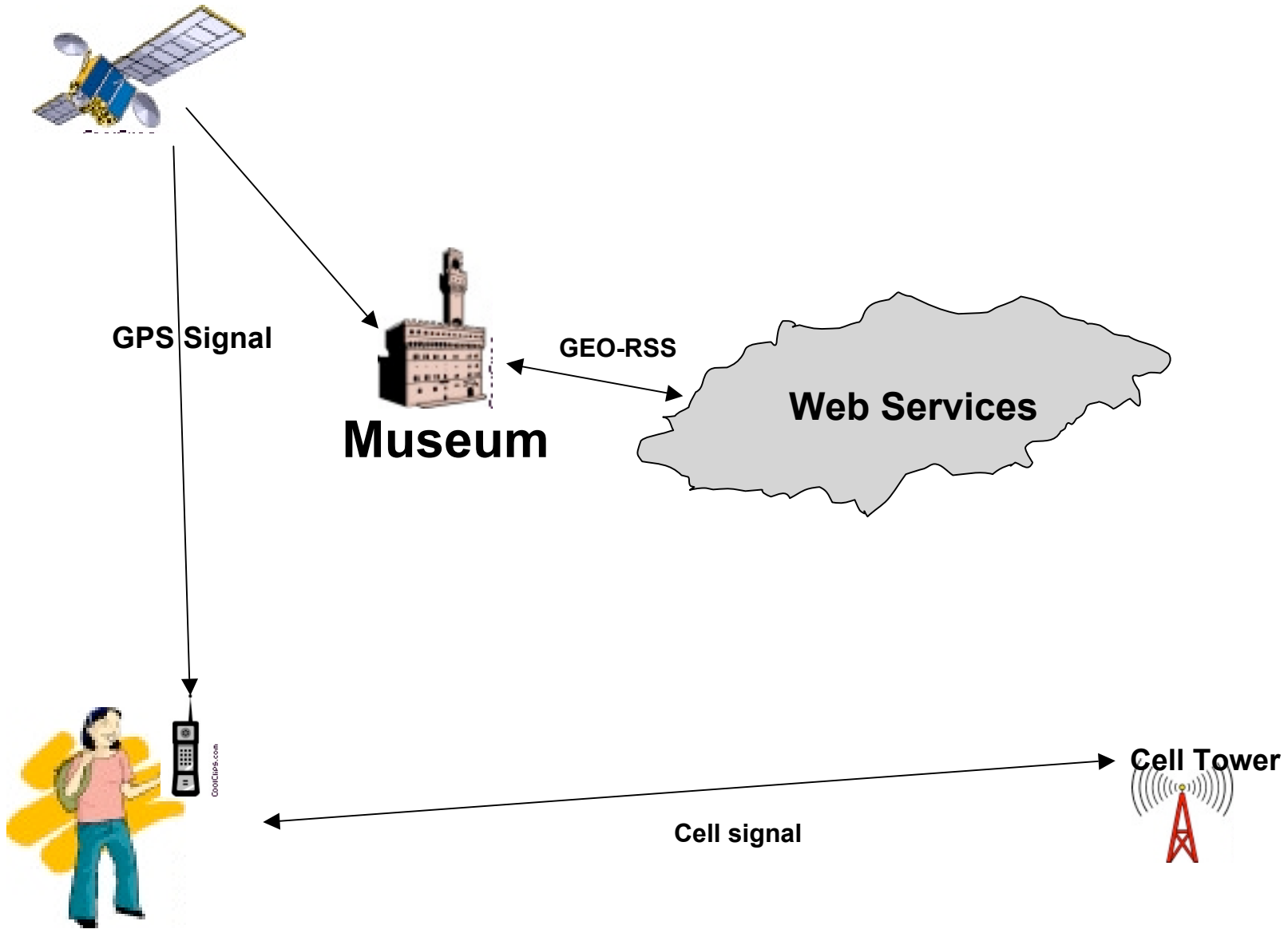


Cell signal

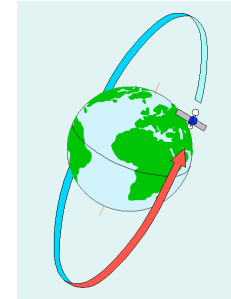


# Geo-Aware Opportunity

Geosynchronous Satellite



# Geo-Aware Opportunity



Orbiting  
Satellite

Geosynchronous Satellite



GPS Signal



Museum

GEO-RSS



Web Services

Cell signal

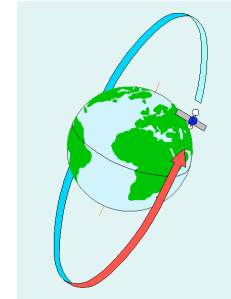
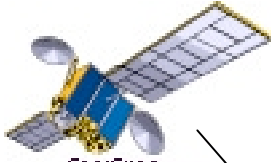
Cell Tower



DocuClips.com

# Geo-Aware Opportunity

Geosynchronous Satellite

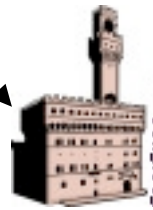


Orbiting Satellite

Earth Images

Mapping Database  
(Google etc.)

GPS Signal



Museum

GEO-RSS

Web Services



Cell Tower



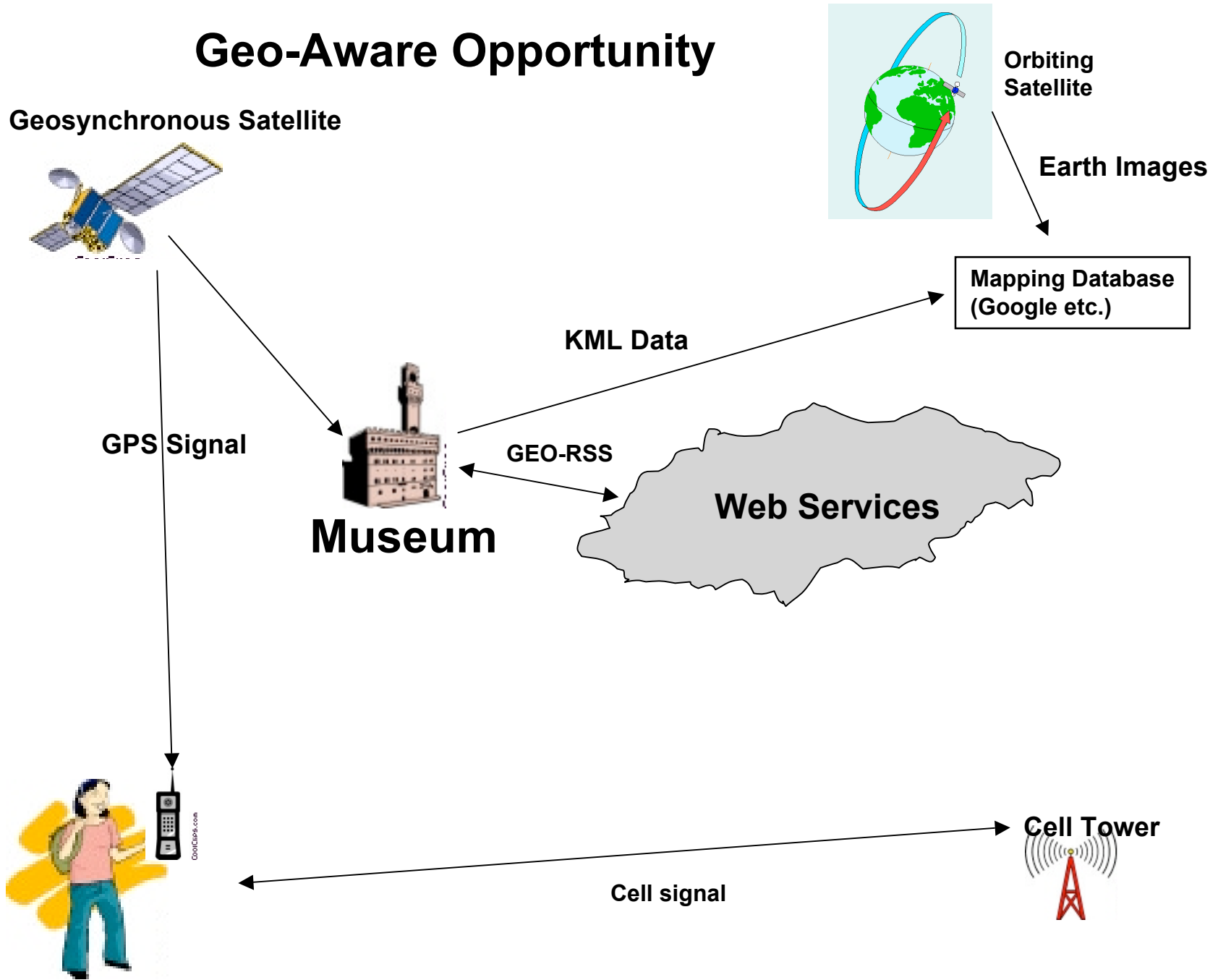
Cell signal



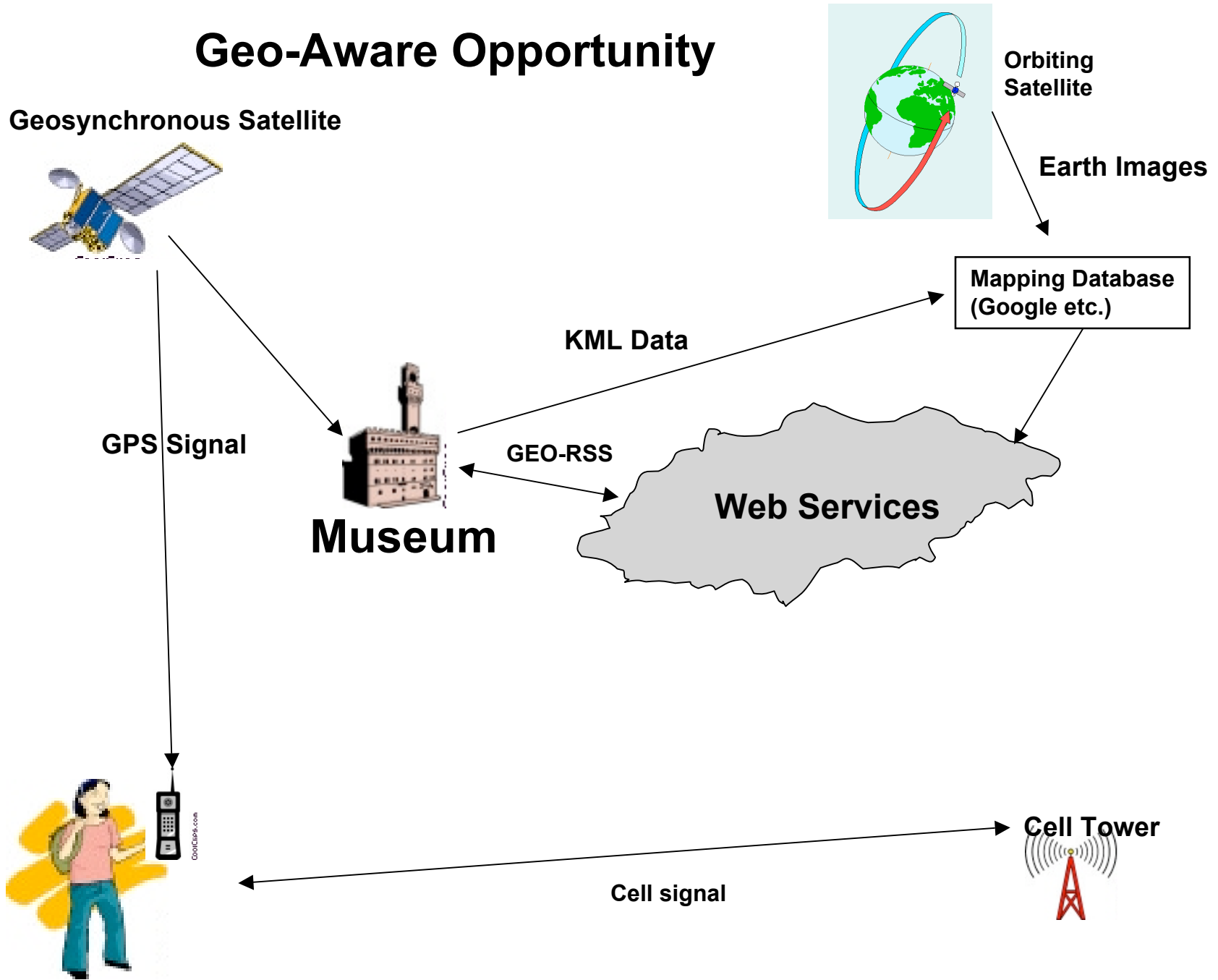
DocuClips.com



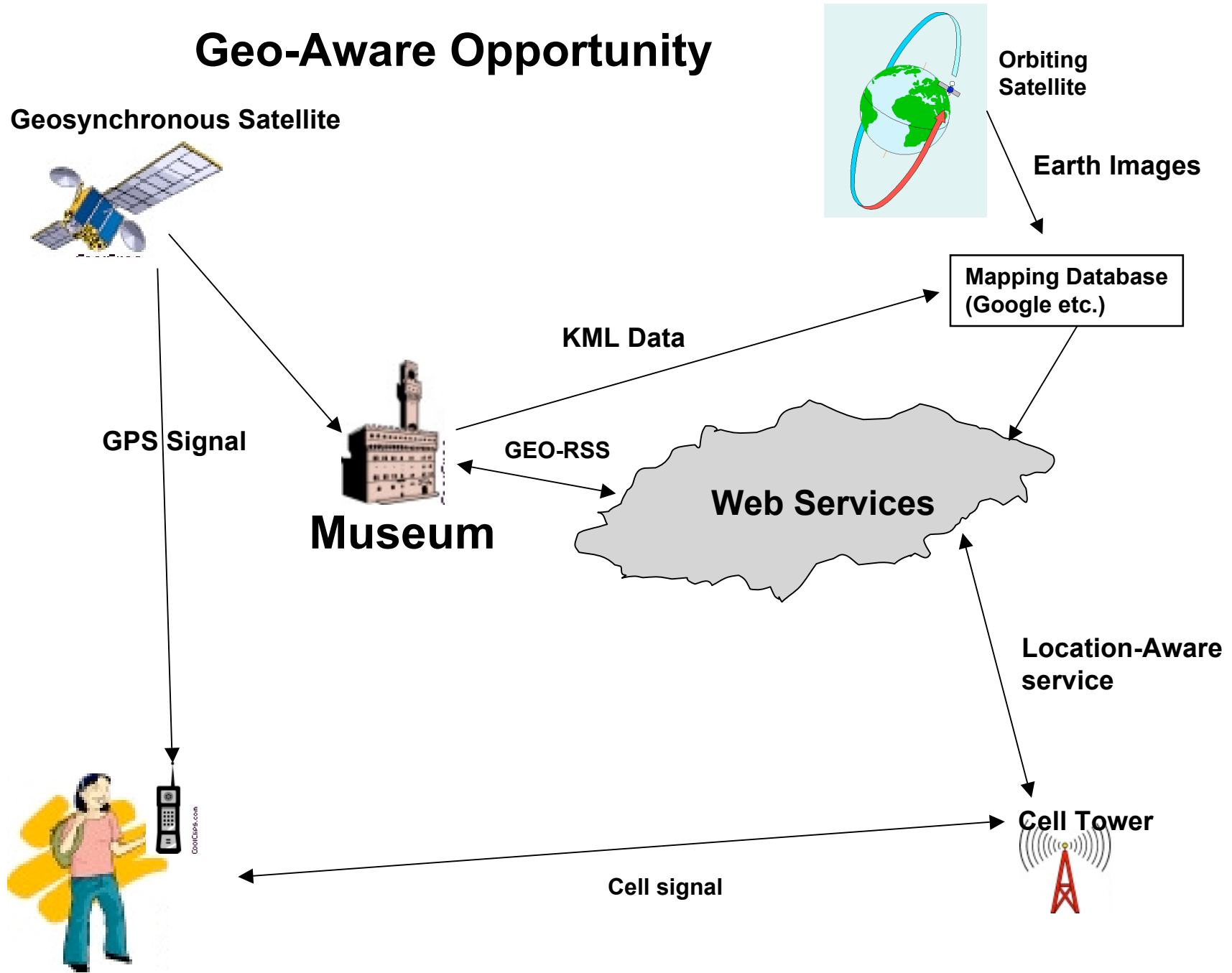
# Geo-Aware Opportunity



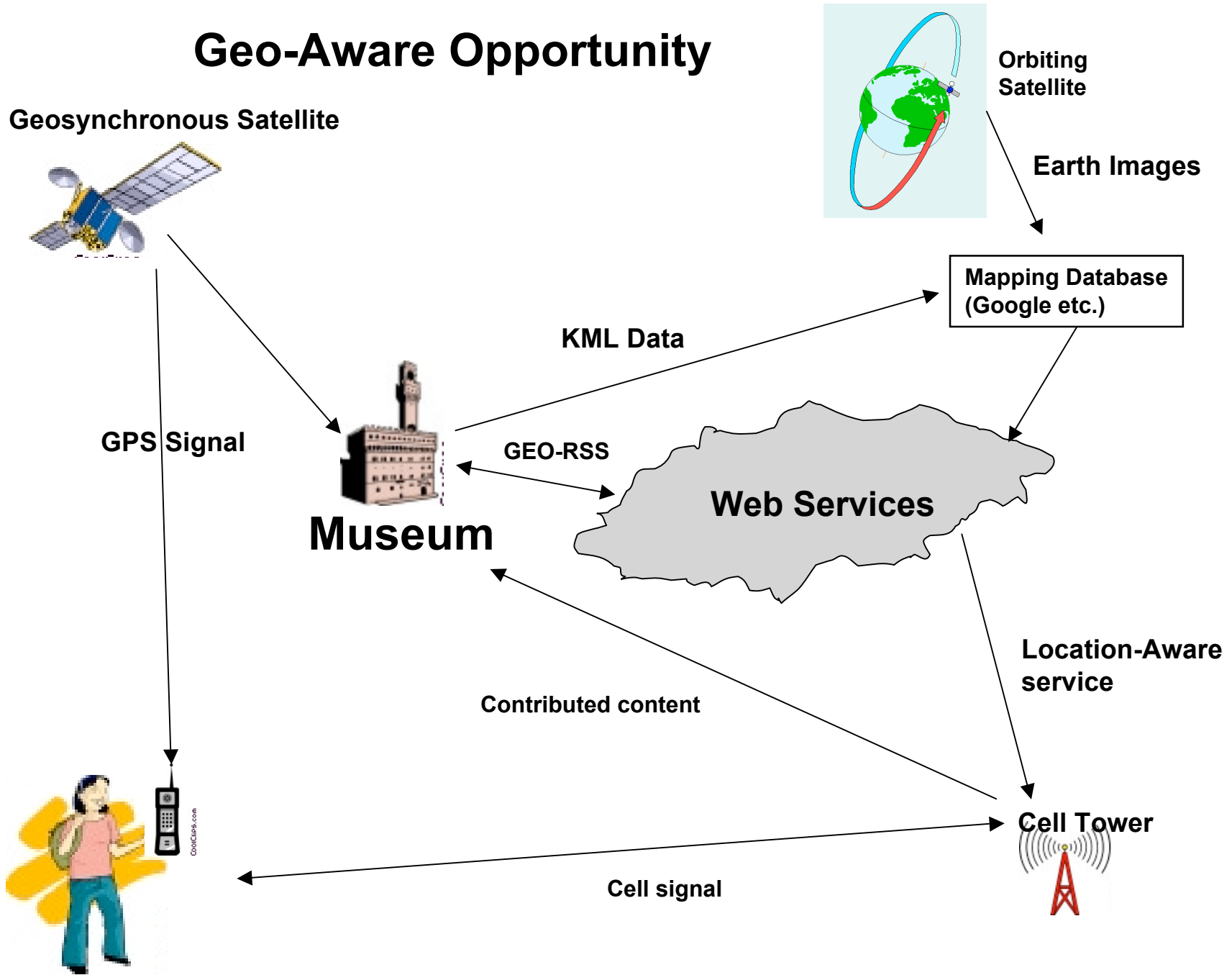
# Geo-Aware Opportunity



# Geo-Aware Opportunity



# Geo-Aware Opportunity



# Architectural Components

- Geo-positioning Satellite
- GPS receivers in consumer devices
- Standards for location content representation (GML/KML)
- Orbiting Satellite
- Digital mapping databases with open API's
- Mashups
- Web feeds in RSS and Atom
- Location-based data service providers - open or subscription
- Tagging applications

# Potential

- Share authority
- Repatriate collection, virtually
- Engage communities
- Contextualize in time and place
- Collocate with other museum objects
- Expand audience to everyone at all times
- Make 100% of the collection accessible 24x

# Real-world embedded content

- Geo-aware collections populate the earth
- Locals and tourists can choose to receive them
- Tuning can populate a location with objects by date
- Objects and specimens make relations
- Re-contextualized in this way, the objects invite user interaction, comment and additional knowledge
- The alienation people and communities felt from collections removed to distant institutions can be overcome, resolving conflicts of authority, ownership and disengagement.

# To Do

- Assign every object a url; follow 1:1
- Obtain geo-locations
- Build on Place/Time authority; ECAI etc.
- Publish to geo-feeds
- Invite, and incorporate user feedback



# Challenges

- Museum Policy
- Constructing Shared Geo-Temporal Authority Databases
- Building/Participating in Cultural Heritage Location-Service
- Developing User Interfaces
- Research Meaning of “here’
- Recruiting User Contributions

# Prospects

- A 21st century paradigm for museums
  - Virtual cultural representation interpenetrating the physical world
  - Dispersed heritage reassembled in context of space and time
  - Disenfranchised populations engaged in contributing content and interpretation

# Thank you

David Bearman  
[dbear@archimuse.com](mailto:dbear@archimuse.com)

text at:

<http://www.archimuse.com/activities/activities.html>