Pacific Northwest Regional Pilot
Oregon State Demonstration

December 1, 2009
Salem, OR

Building a Regional Capability

Welcome and Opening Remarks

Major General Raymond F. Rees

The Adjutant General, Oregon

Meeting Purpose & Outcomes

Ken Murphy
Director, Oregon Emergency Management

Purpose & Outcomes

Purpose:

- Share with state leaders advances in technology for state-wide and regional visualization platforms for day-to-day operations and incident management
- Inform state leaders and related agencies of the benefits that others have realized by using new technologies for regional information sharing
- Hear state leaders' thoughts regarding support for a regional information sharing initiative

Outcomes:

Shared understanding of:

- existing technologies and opportunities for information sharing within and among states
- state leadership level of support for a regional information sharing pilot
- state leadership priorities/constraints in how best to advance emergency management operations

Participant Introductions; Administrative Notes

John Sneed

Deputy Director, Office of Emergency Management

Virtual USA Strategic Vision

D'Arcy Morgan & Chris McIntosh
DHS, S&T
Command, Control, and Interoperability Division

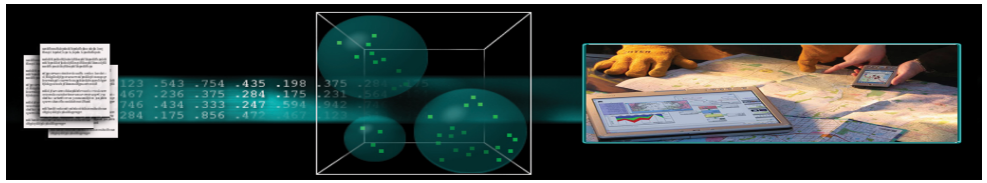
Today's Challenges

- The need for real-time, actionable information is critical during day-to-day and emergency response operations.
- Critical information is often trapped in silos and inaccessible to those who need it the most.
- Components, systems, and architectures have limited ability to provide robust information sharing without the benefit of a national strategy and applicable standards.
- Information does not make it into the hands of the people who need it most.

Virtual USA

- Creates a cost-effective nationwide capability that significantly improves information sharing and decision making during emergencies.

- Based on current and emerging technologies, Virtual USA integrates existing information sharing frameworks and technologies to enable collaboration at the local, tribal, state, and Federal levels by providing critical context for information - thereby making it actionable



Virtual USA (cont'd)

Developed by the Department of Homeland Security's Command, Control and Interoperability Division in partnership with the response community, the Virtual USA concept aims to improve emergency response by ensuring practitioners at all levels have immediate access to the information they need to make decisions, when they need it.

Importance of Pilots

- Pilots prove that new technologies and concepts really work before introducing them as solutions.
- A single pilot demonstration rarely generates sufficient information to serve as a national model.
- Every jurisdiction and geographic region has different needs and issues.
- DHS, S&T goal is to conduct pilots in as many places as possible.
- Pilot demonstrations influence neighbors - speeding the adoption of solutions across the Nation.

Homeland Security

Regional Context

Ken Murphy

Sean McSpaden

Deputy State Chief Information Officer

Virginia Interoperability Picture for Emergency Response (VIPER) Demo and Q&A

Bobbie Atristain
Virginia Department of Emergency Management

Chris McIntosh, CCI Support

Virtual Alabama
Demo and Q&A

Chris Johnson
Geospatial Technologies and Virtual Alabama
Program Manager

Discussion: Applicability to State, Local & Regional Situations

John Sneed and Sean McSpaden

Spectrum of Events

- Local (First Responder)
- Local (Multi-agency response)
- County-wide (multiple jurisdictions)
- Multi-county event (i.e. routine winter storm events)
- Statewide / Regional catastrophic Event (Cascadia Subduction Zone earthquake and resulting tsunami)

Potential Information Uses

- Mobile data display – First Responders
- Mapping/ Data Visualization: Incident Commanders, City and County EOCs, State AOCs, State ECC, FEMA JFO
- Daily jurisdictional / agency use
- Pre-Event Mitigation planning
- Response Coordination
- Post-Event Recovery Planning

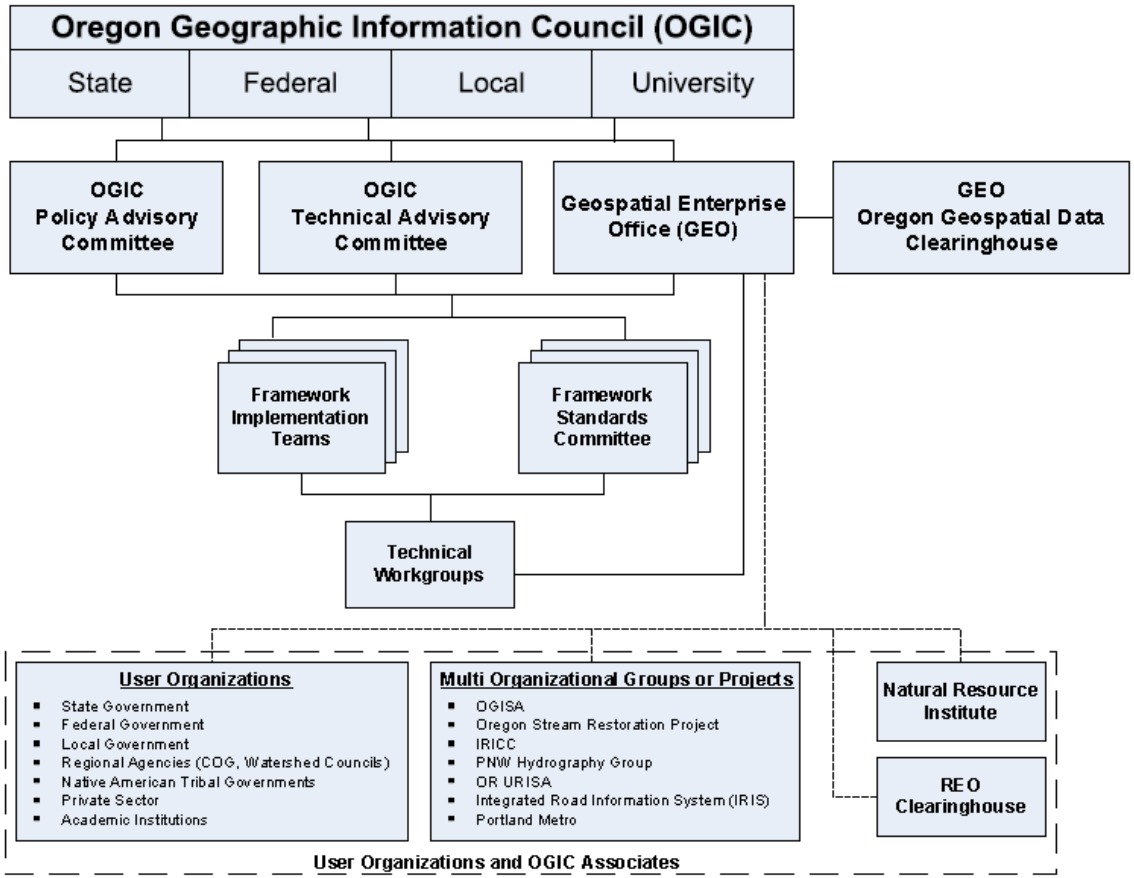
Oregon GIS and Information Sharing Update

Sean McSpaden
Oregon Deputy State CIO

Oregon GIS and Information Sharing Update

- GIS Governance Structure
- Current Datasets and Standards
- Existing Systems and Capabilities
- Future Needs and Next Steps

Oregon GIS Governance Structure



Building a Regional Capability

Oregon GIS Governance Structure

- Oregon Geographic Information Council (OGIC)
  - created by Executive Order (EO – 02) and is composed of representatives from 22 state agencies, four (4) local governments, and two (2) federal agencies
  - provides leadership for the GIS Community in Oregon and is the governing body overseeing GIS development across state government
  - Is supported by four (4) primary groups
    - Policy Advisory Committee
    - Technical Advisory Committee (GIS Program Leaders – GPL)
    - Oregon Geospatial Enterprise Office (GEO)
    - Framework Implementation Team (FIT)

Oregon GIS Governance Structure

- OGIC Policy Advisory Committee (PAC) provides
  - Strategic planning, budgetary, and policy development for OGIC
- PAC Membership – 16 participating agencies
  - Polk County
  - Administrative Services (GEO)
  - Agriculture
  - Oregon Emergency Management/ Military Department
  - Lane Council of Governments
  - Fish and Wildlife
  - Forestry
  - Human Services
  - Oregon State University – Institute of Natural Resources
  - Bureau of Land Management
  - Revenue
  - Transportation
  - Water Resources
  - Watershed Enhancement Board
  - United States Geological Survey

Oregon GIS Governance Structure

- OGIC GIS Program Leaders (GPL) serves as
  - The OGIC technical advisory committee
  - A technical level forum for participating members to exchange ideas, share expertise and propose solutions to technical problems related to geospatial technologies
- GPL Membership
  - Membership in the Oregon GPL is voluntary.
  - OGIC members are encouraged to appoint the GIS coordinator, or equivalent position, of each agency

Oregon GIS Governance Structure

- GPL – 18 Participating Agencies (State, Local, Federal)
  - Administrative Services (GEO)
  - Agriculture
  - Oregon Emergency Management/ Military Department
  - Environmental Quality
  - Fish and Wildlife
  - Forestry
  - Geology and Mineral Industries
  - Human Services
  - Land Conservation and Development
  - Parks and Recreation
  - Port of Portland
  - State Lands
  - Revenue
  - Transportation
  - Water Resources
  - Watershed Enhancement Board
  - United States Geological Survey

Oregon GIS Governance Structure

- Oregon Geospatial Enterprise Office (GEO)
  - Coordinates with government agencies to develop and manage Oregon's geographic information
  - Communicates about Geographic Information Systems (GIS) issues with users across Oregon
  - Guides development of Oregon's GIS data standards through Framework Implementation Teams
  - Serves as Oregon's point of contact for other organizations about geographic information and GIS.
  - Hosts the Oregon Geospatial Data Clearinghouse, an electronic library of geographic information

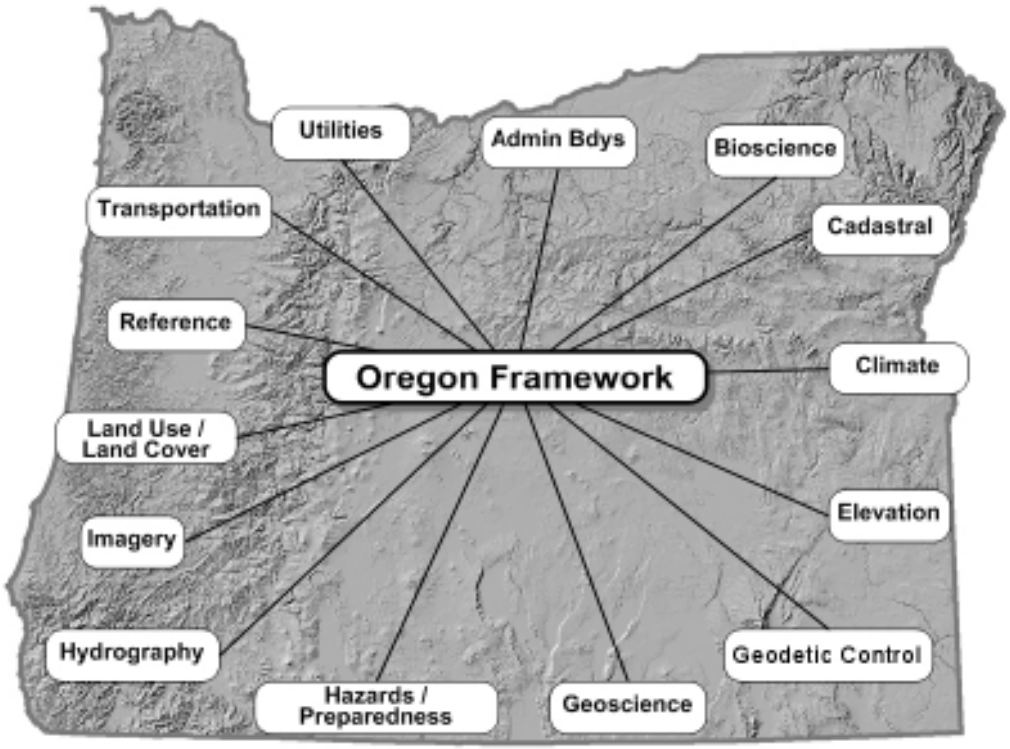
Current GIS Datasets and Standards

Framework Implementation Teams

- Framework Implementation Team Website
  - http://www.oregon.gov/DAS/EISPD/GEO/fit/FIT.shtml
- Fourteen (14) Framework Implementation Teams
- 350+ people on Framework Implementation Teams
- Tasked with Implementation Plan and Standard for each Framework Theme
  - A data steward has been identified for each Framework Theme
    - One agency acts as steward for each data set, on behalf of all others, to develop and maintain data
  - 20 + GIS Data Standards developed to date
- Standards Development and Adoption Process ongoing
  - 11th Standards Forum was held in March 2009

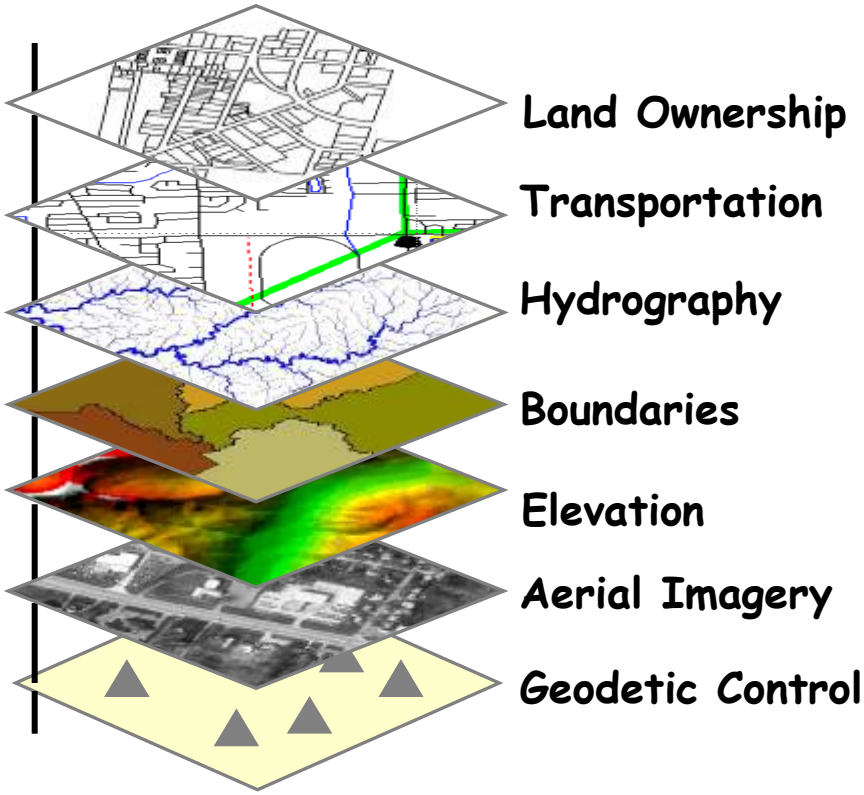
Framework Implementation Teams

- Framework forms the data backbone of GIS
- Oregon's FIT is closely aligned with the National Spatial Data Infrastructure initiative
- Oregon's FIT is focused on the development and stewardship of the seven (7) national GIS Framework Themes and seven (7) commonly needed Oregon data themes

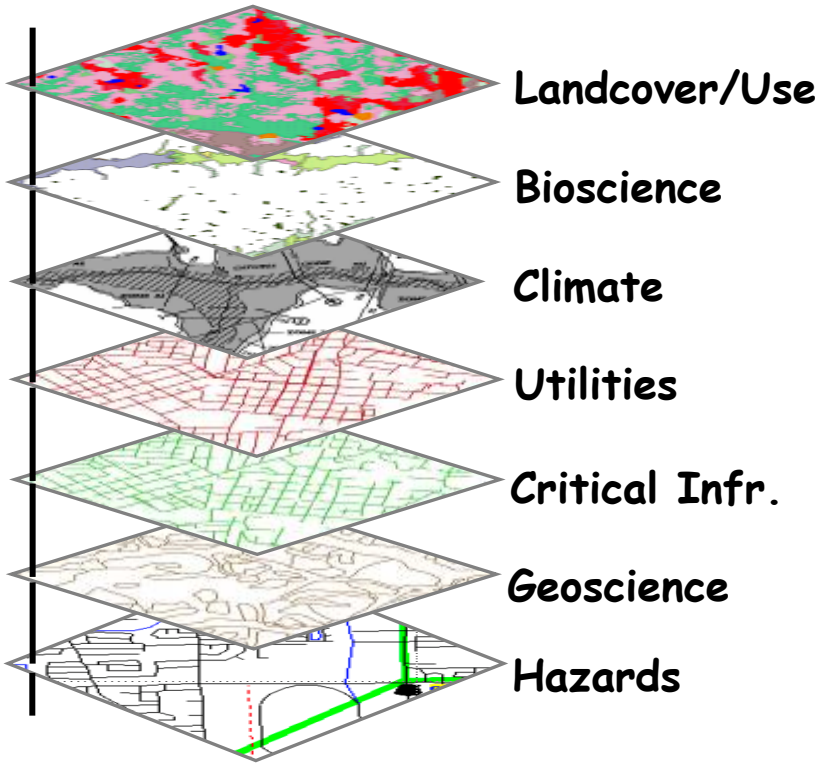


GIS Framework Data

National Standards

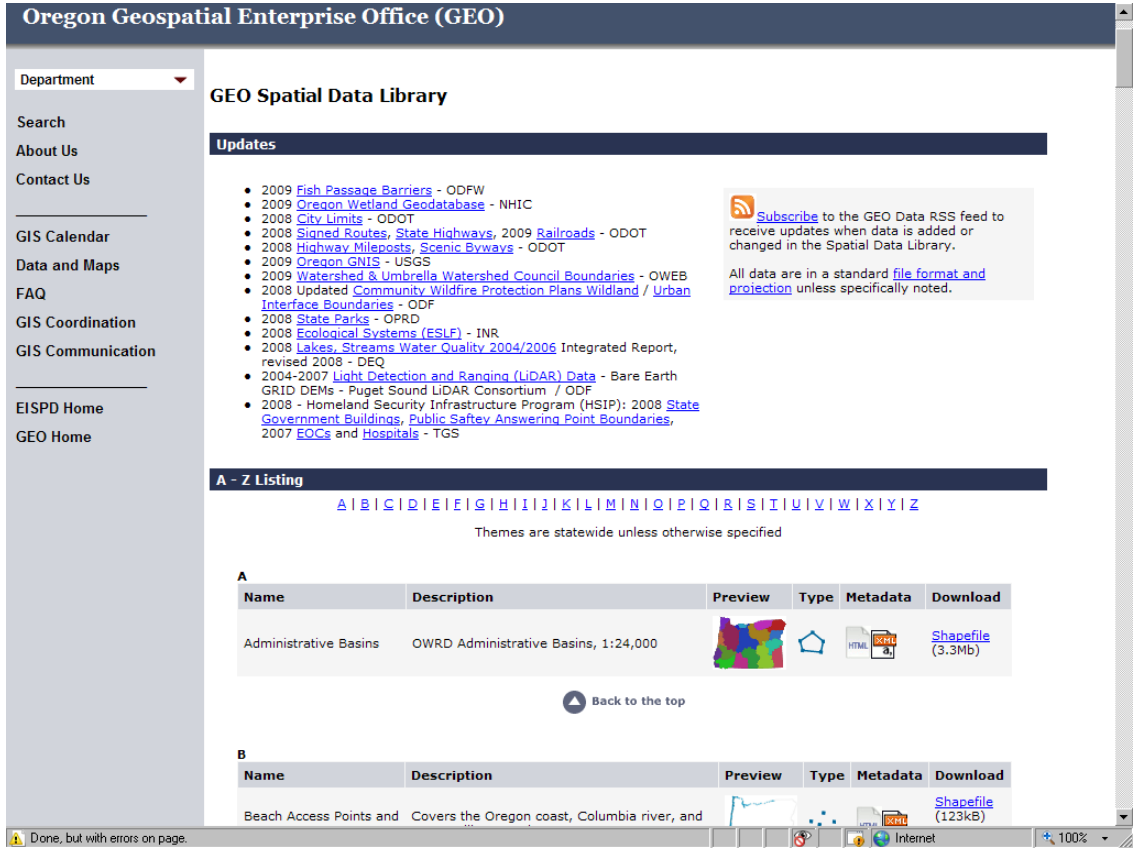


Oregon Standards



GEO Spatial Data Library – Alpha List

- Alpha List of Spatial Data
- ~ 100 datasets are available for download
- Metadata for each dataset is available
- Challenges: Limited functionality and file types



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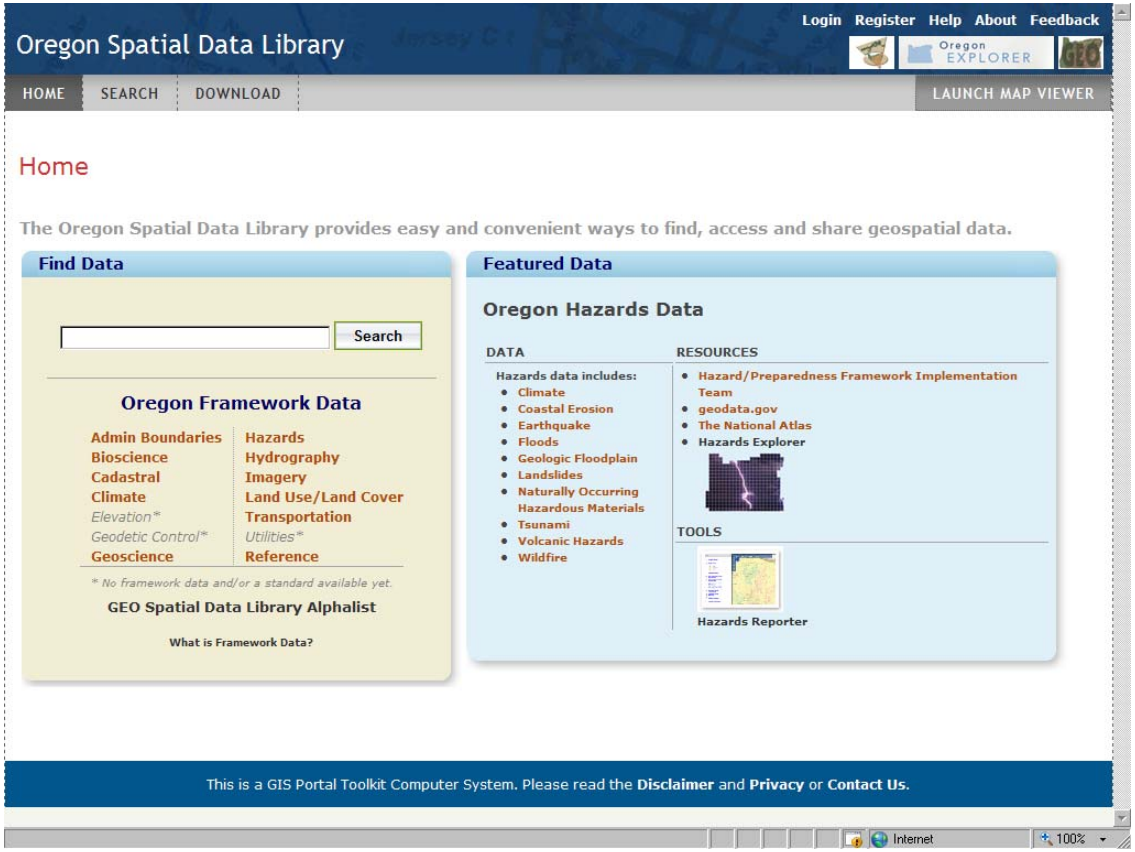
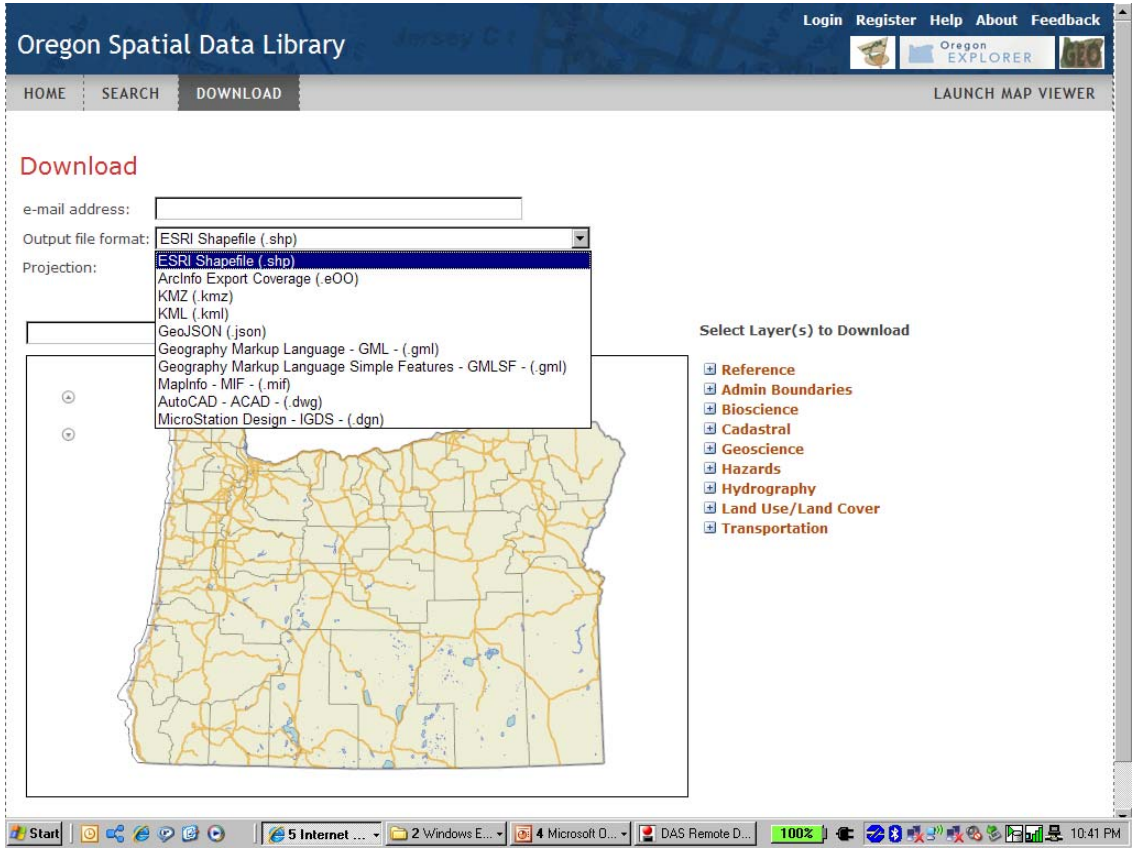
Oregon Spatial Data Library

- Searchable data-access tool for Oregon researchers, students, public agency staff, private industry and the public at large



Oregon Spatial Data Library

- Spatial Data is available for download in a variety of output formats and projections
- Map Viewer is also provided to ensure the user has a chance to review the metadata on the data set prior to download



Statewide Aerial Imagery

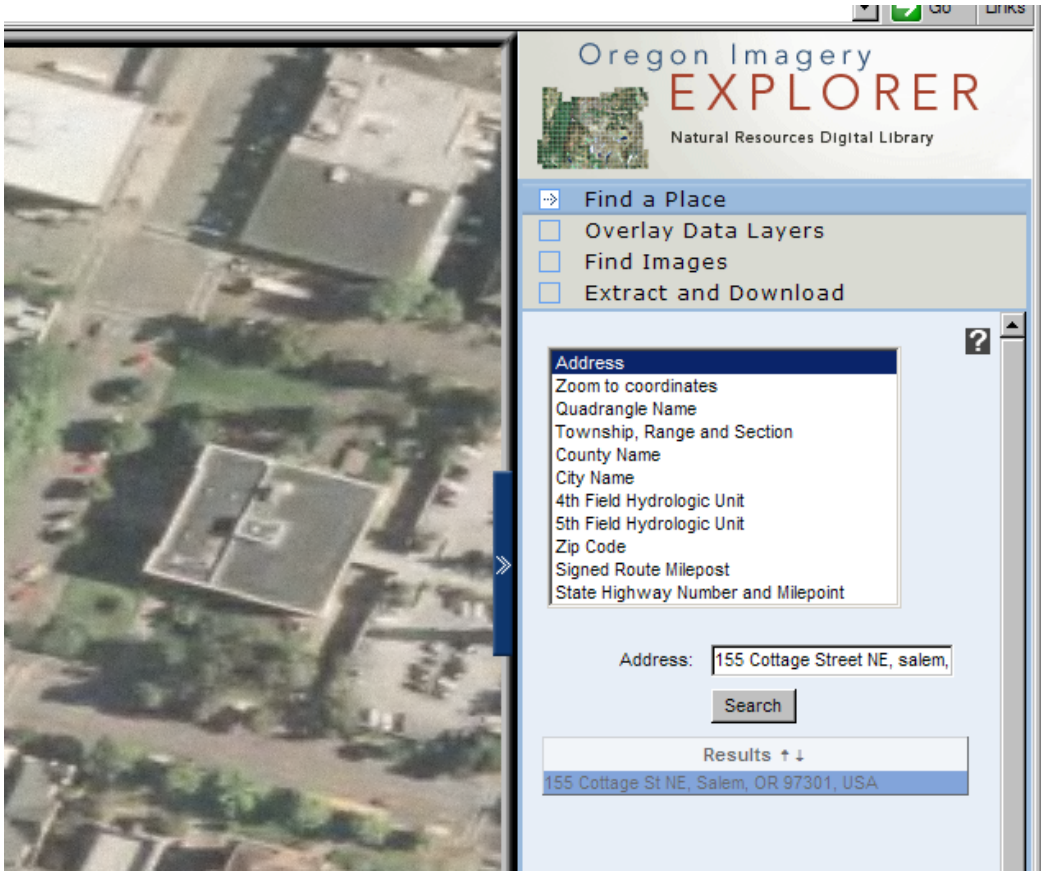
- 1996, 1999, 2005 Digital Orthoimagery
  - Available in various projections through the Oregon Imagery Explorer
  - 2005 Imagery available for viewing, streaming or clip/zip/ship download
- 2009 Digital Orthoimagery

  http://www.oregon.gov/DAS/EISPD/GEO/fit/orthoimagery/OrthoFrame.shtml
  - Acquiring imagery in partnership with US Department of Agriculture National Agricultural Imagery Program (NAIP)
  - Flight lines for Oregon were completed as of August 3, 2009
  - Imagery mosaics for most Oregon counties have been delivered
  - Imagery processing underway
    - 1 meter – Federal Agencies
    - ½ meter – State and local governments
      - true color and color infrared in Oregon Lambert custom projection, as well as UTM and State Plane.
  - Expect delivery by February 2010

Building a Regional Capability

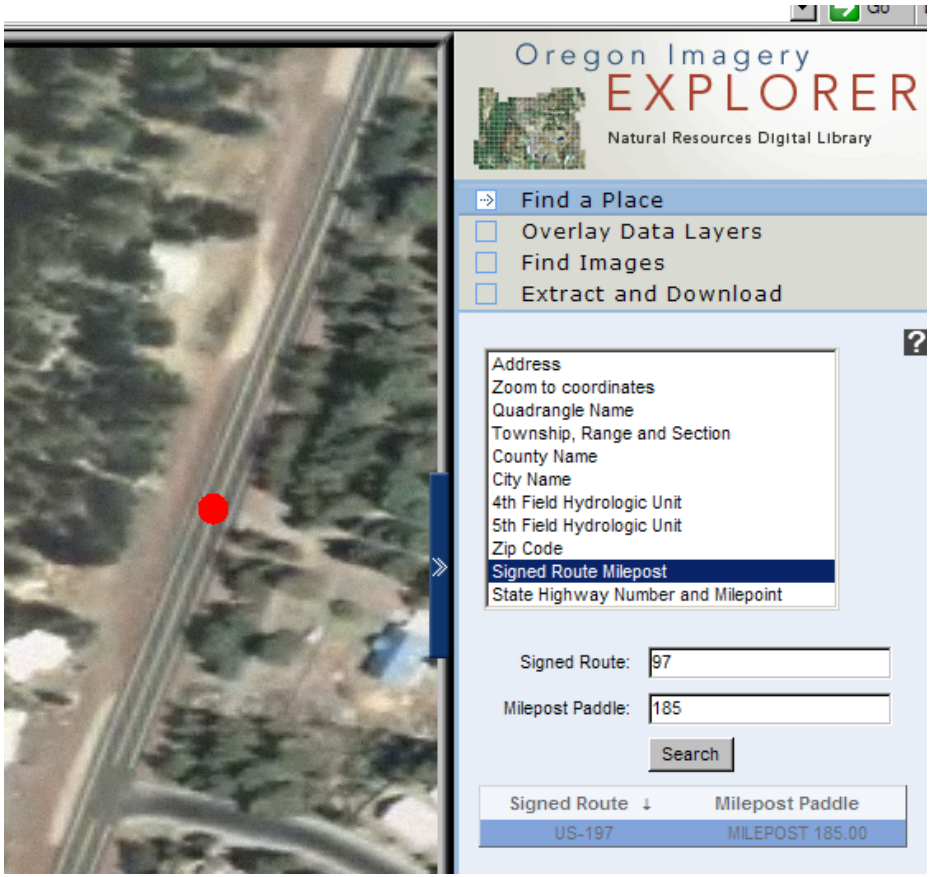
Oregon Imagery Explorer

Find a Place:
Address



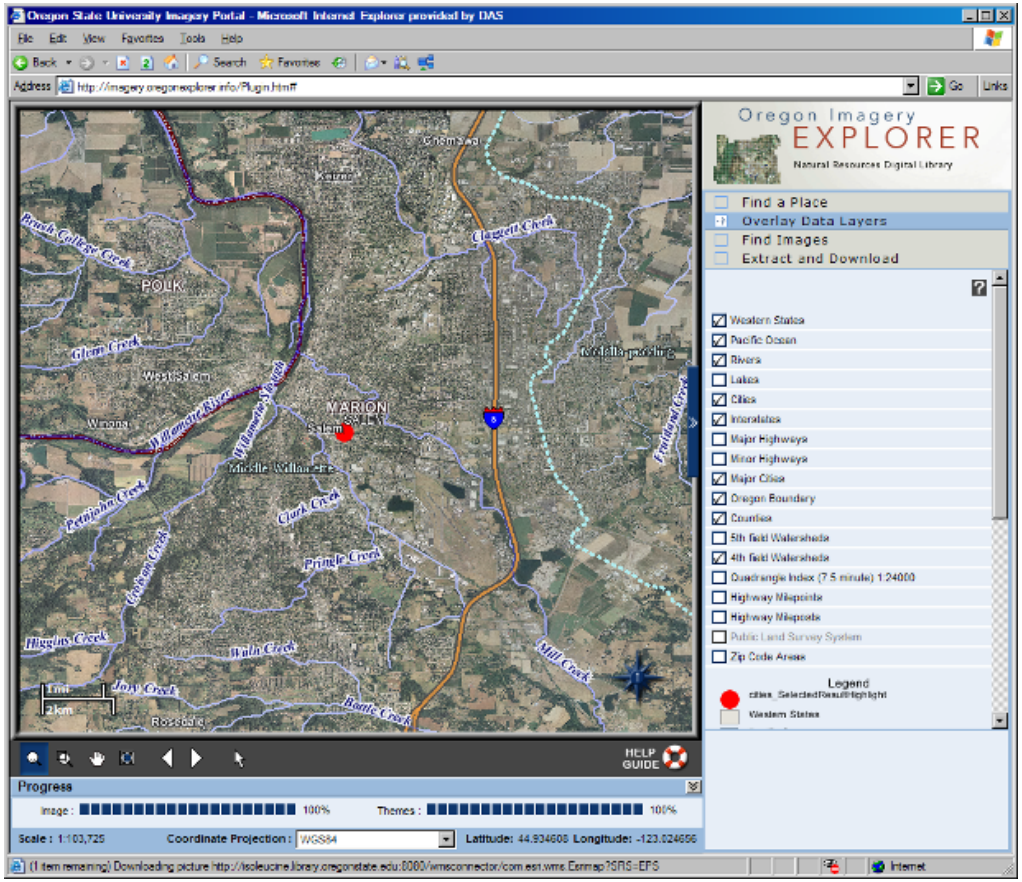
Oregon Imagery Explorer

Find a Place:
Signed
Route
Milepost



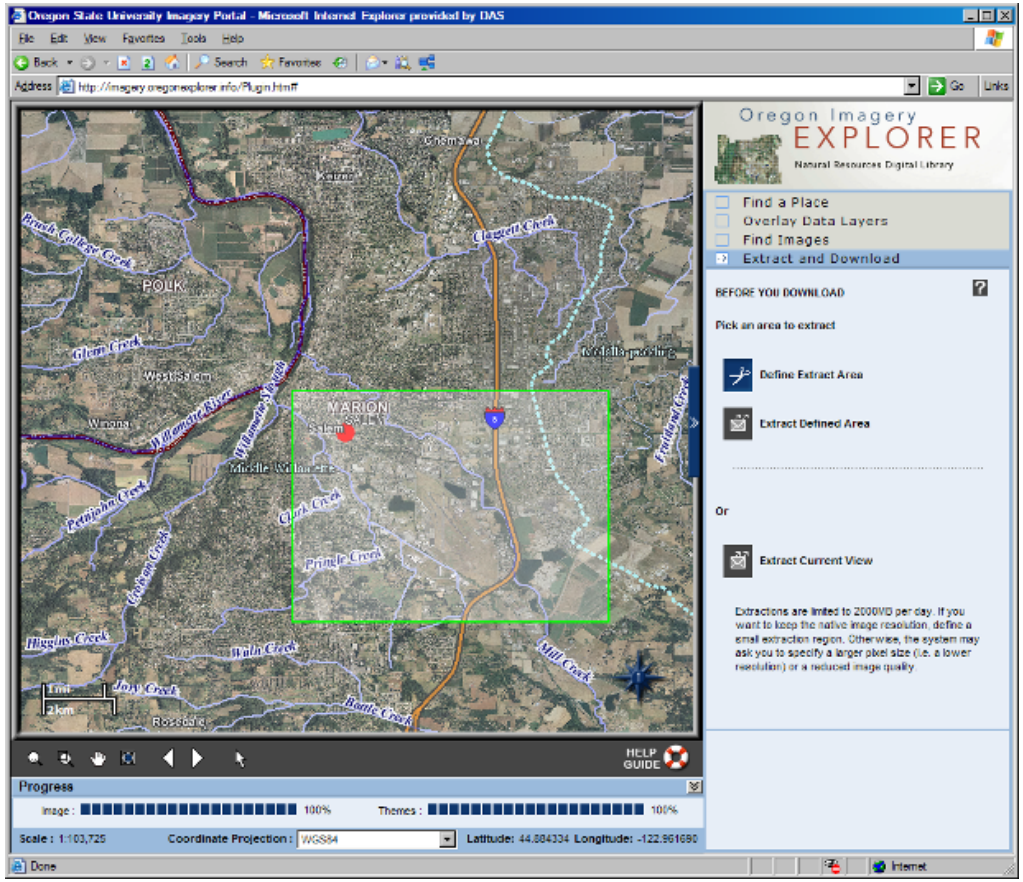
Oregon Imagery Explorer

Overlay Data Layers: Streams and Watersheds



Oregon Imagery Explorer

Extract data:
"Clip, Zip
and Ship"



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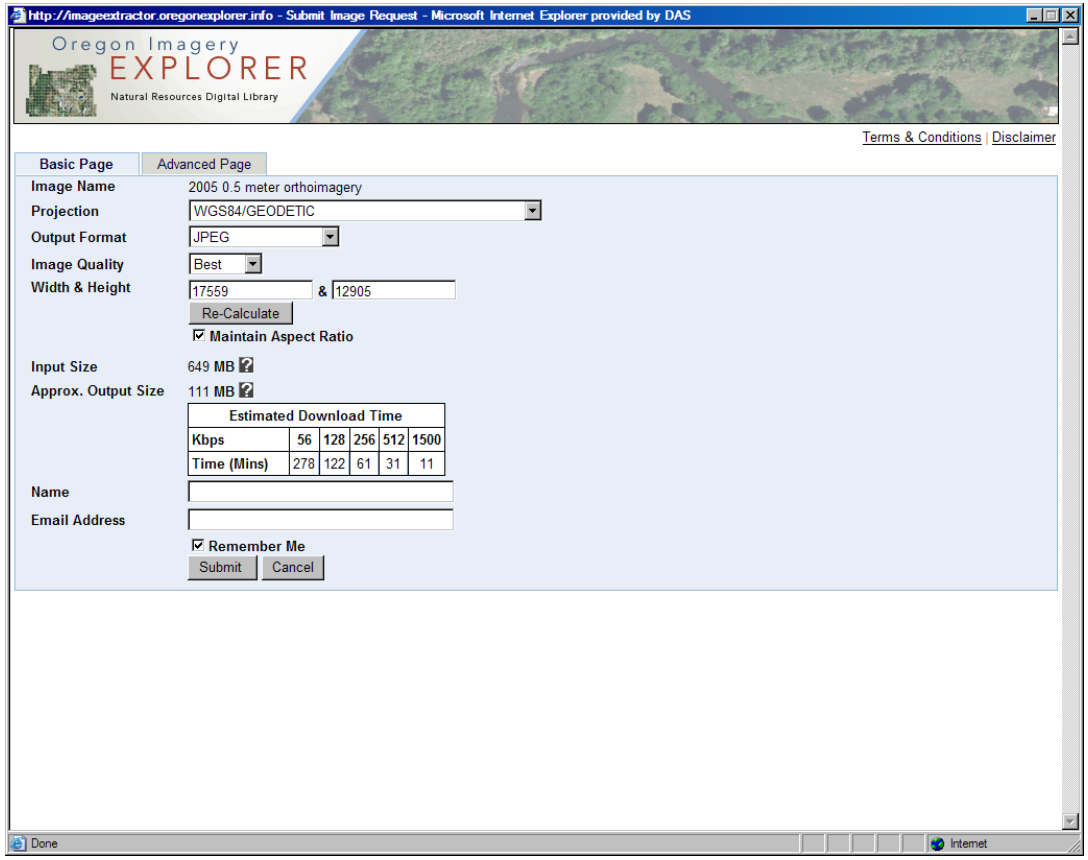
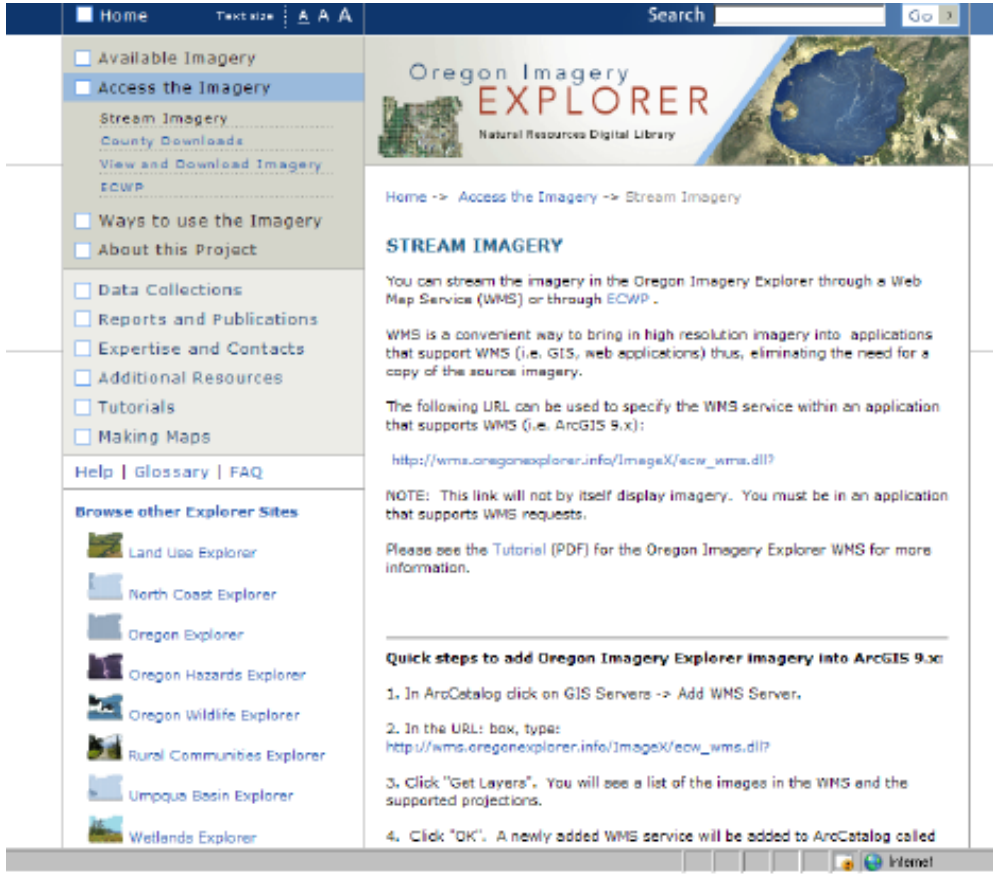


Oregon Imagery Explorer

Web Map service (WMS)

- Widely used open protocol
- Data "Service" available via Internet
- "Service" is "Consumed" by clients including GIS software and other applications including Microsoft Office Products



Transportation Framework

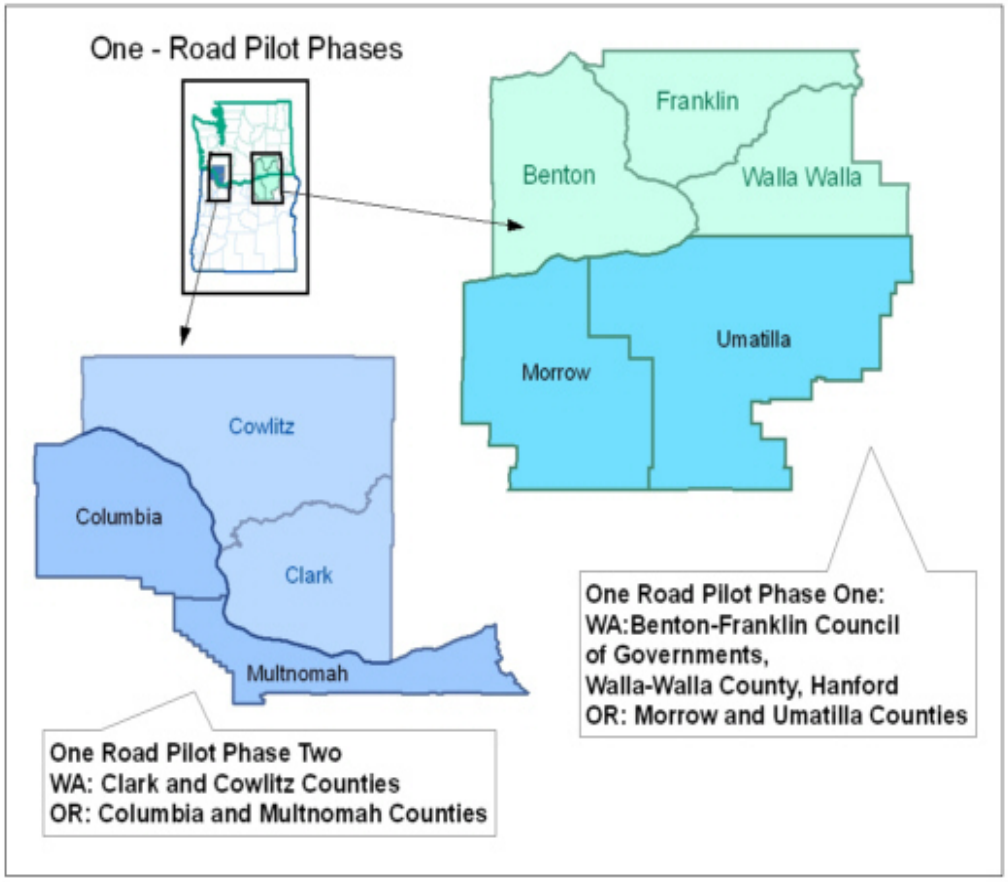
- Transportation Framework Team formed
  - http://www.oregon.gov/ODOT/TD/TDATA/gis/TransFIT.shtml
- Road Centerline Data Standard adopted
  - http://www.oregon.gov/DAS/EISPD/GEO/docs/Transportation/RoadCenterlineDataStandardv5.pdf
  - Oregon and Washington have agreed to use the standard for Road Centerline data development
  - California and Idaho are reviewing and considering adoption
  - This would allow each of the states to "join" together to create a single/common NW coverage for roads.
- Within Oregon the data is updated locally; ODOT is the data steward
- Integrated with state highways and federal resource roads
- Initial product will have road data from Federal and State as well as Benton Co, Clatsop Co, Jackson Co, Josephine Co, Linn Co, Polk Co
- Coordinated with regional & national models

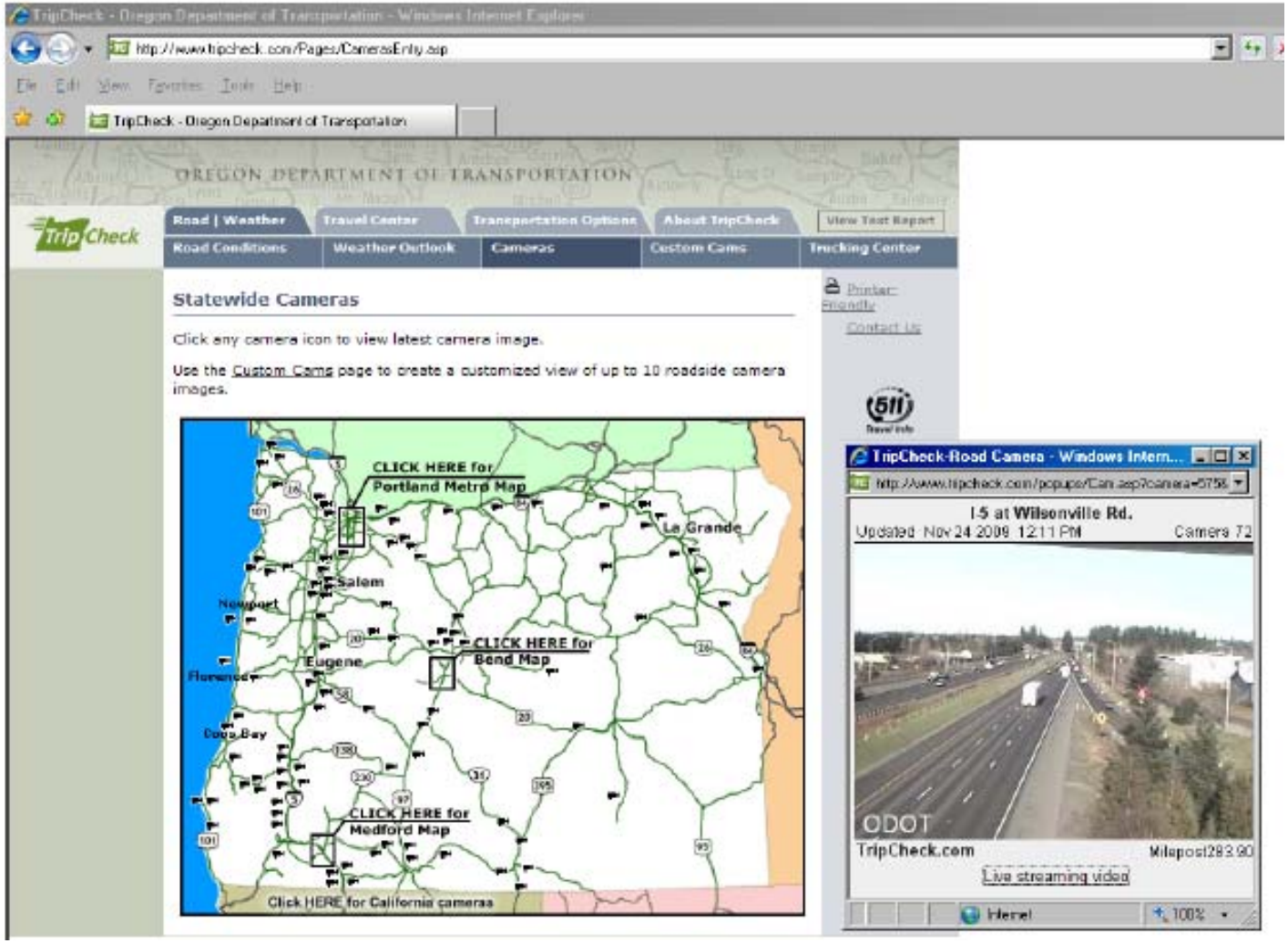
One-Road Pilot Data User Portal

- A Transportation Pooled Fund project
  - Prototype is up and running on the WA-Trans site
  - Plans are in development to port it to Oregon.
- Portal allows road authorities to check their data in/out to a common database.
  - Washington DOT is the lead for the project
  - Idaho DOT is a partner in the project as well

http://www.wsdot.wa.gov/Mapsdata/TransFramework/Default.htm

One-Road Pilot Data User Portal





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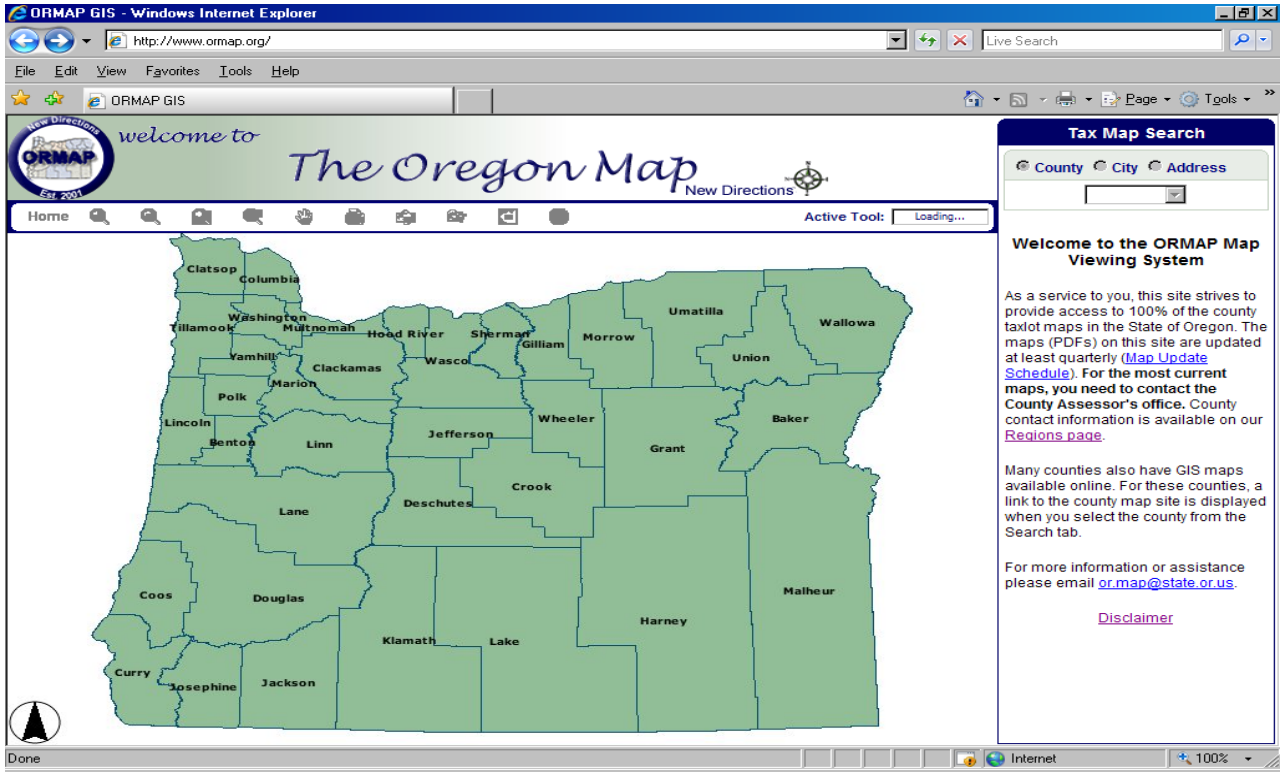
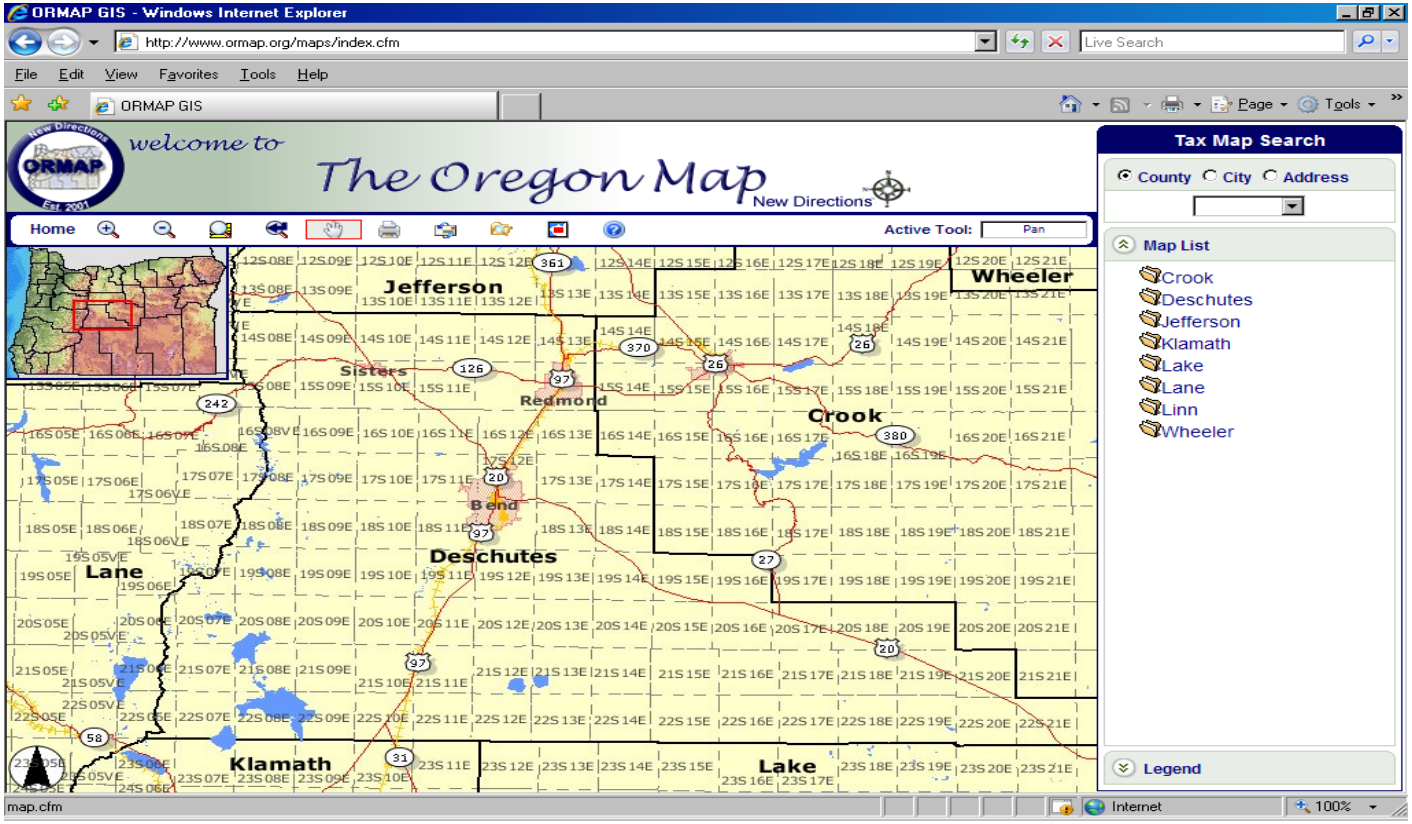
Cadastral – Tax Lot Data



Vision: 36 Counties, 9 Regions, One State, One Map, One Taxlot
Base GIS for Public and Private use

Building a Regional Capability

Cadastral – Tax Lot Data



Cadastral – Tax Lot Data

- Cadastral Data Sharing Workgroup formed
- Cadastral Data Exchange Standard adopted
- GIS Cadastral Data License Agreement in place
- 2007-09 - Agreements with 18 counties to date
- 2009-11 – focus on completing agreements with the remaining 18 counties
- 09-11 - FIT proposal to OGIC would provide ($72,000)
  - $1000 per county/per year to deliver data in standard format to Dept. of Revenue ORMAP by Feb. 1 of each calendar year