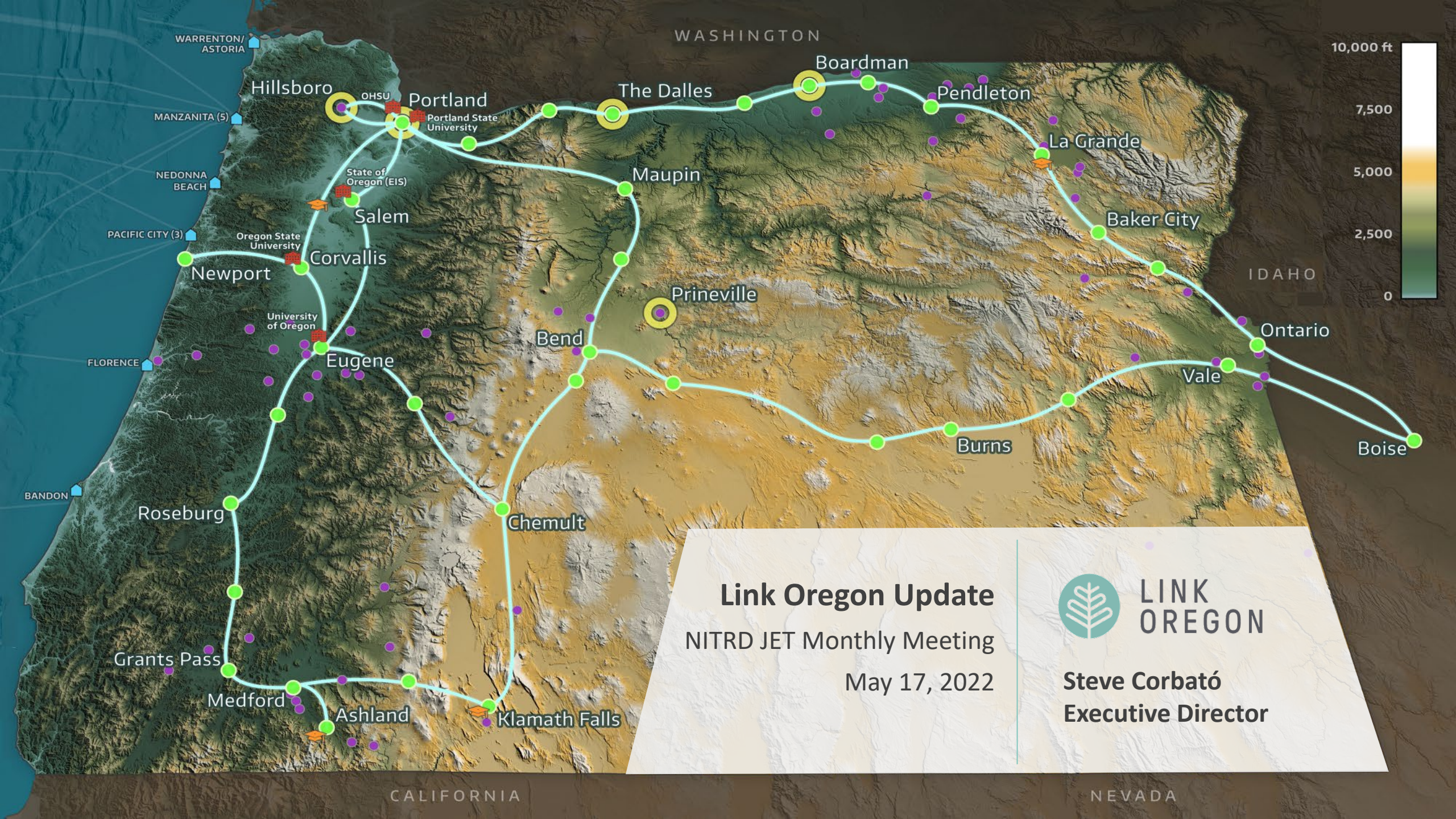

Link Oregon Update

NITRD JET Monthly Meeting

May 17, 2022

LINK OREGON

Steve Corbató
Executive Director

Who We Are & What We Do

- Link Oregon is an Oregon non-profit consortium founded in 2019 by:

Oregon State University · Portland State University · OHSU · University of Oregon · Enterprise Information Services

- Member-focused, middle-mile network backbone provider
- Uses dark fiber and other network assets to serve public and non-profit sectors
- Supports K-12 & higher education, healthcare, libraries, Tribes, state government, and other non-profits
- Provides Ethernet transport and Internet transit as primary services

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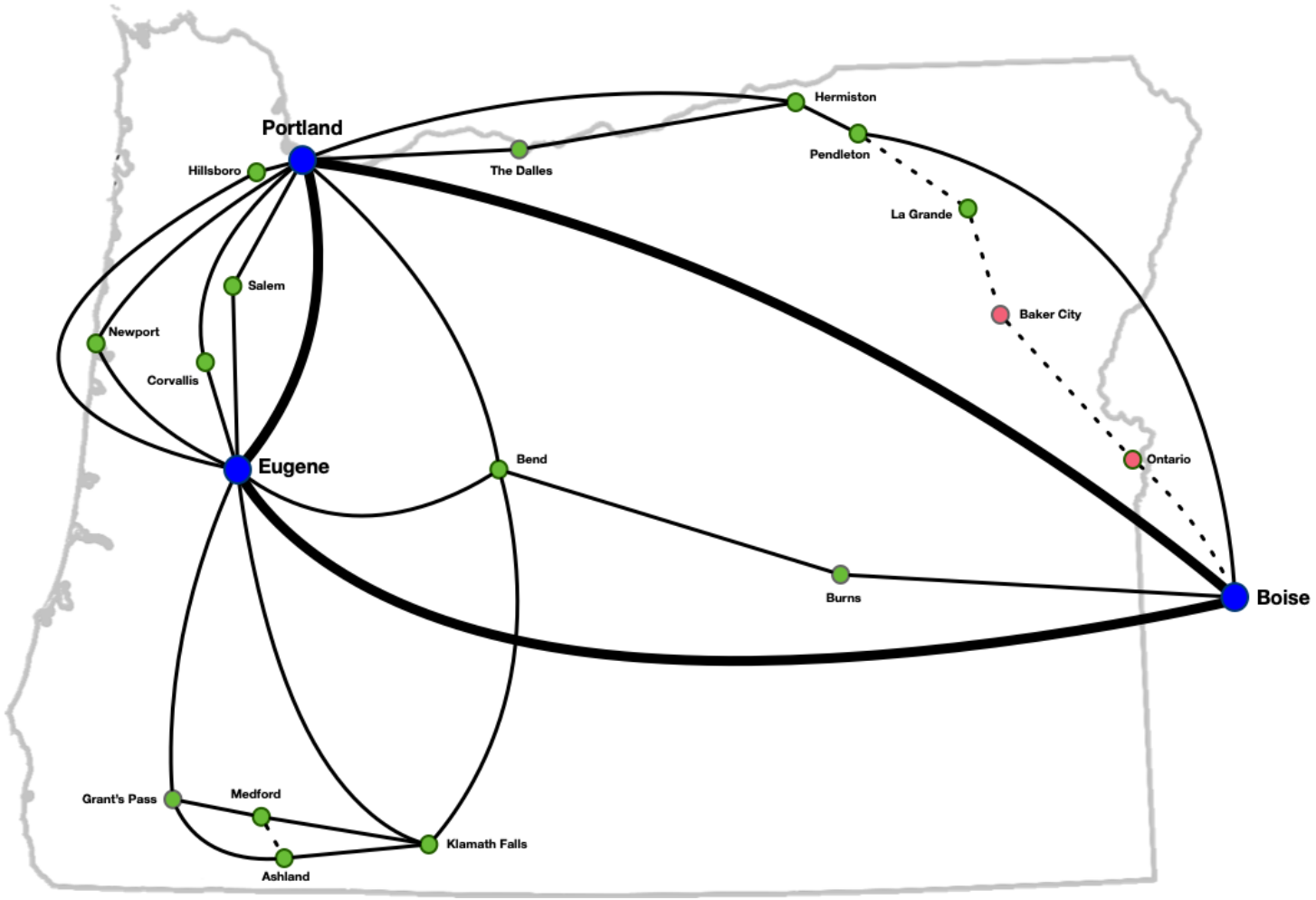
Link Oregon Wave Map



Each circuit is DWDM lambda terminated as a 2x100GBase Ethernet LACP bond

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Future Network Expansion

Planning for next phase of our network expansion ('Phase 3'):

- Oregon Coast (US 101): Rings connecting the northern and central coast regions between Astoria/Warrenton and Brookings
  - Multiple segments for resiliency across the Coast Range: Portland-Scappoose, Astoria, Lincoln City-Hillsboro, Florence-Eugene, and Bandon-Roseburg
  - Existing Newport-Corvallis segment in production
  - Working with Central Lincoln PUD; we already own fiber to Bandon
- Additional communities in eastern Oregon – Lakeview, Prineville, Mitchell, John Day, and Enterprise
  - Resilient connectivity for Lake, Grant, and Wallowa Counties
- Critical southbound resilient connectivity for southern Oregon
  - Potential collaboration with CENIC ($3.25B middle mile project) and Nevada
  - Four corridors - US 101 (Coast), I-5, US 97, and US 95

Mist Elementary School

CASCADE TECHNOLOGY ALLIANCE

Mist, Oregon

CASCADE
TECHNOLOGY ALLIANCE

Statewide eduroam Program

- eduroam is a secure, worldwide network that acts as a giant *hotspot* for the educational & research communities to access each other's WiFi networks; overseen by Internet2 in the US
- Participating institutions provide access to their wireless networks to users from other eduroam connected institutions; users are authenticated by their *home institution*
- Participants include K-12 school districts and ESDs, community colleges, universities, libraries, museums and research entities
- Link Oregon seeks to become an *eduroam Support Organization (SO)*: the SO signs one agreement & pays one fee for all K-12s, libraries, and museums in the state
  - Provides Tier 1 eduroam support to constituents
  - Manages contracting and invoicing of constituents
- Just selected for 2022 cohort in Eduroam on-ramp program
  - As state SO can support 5 school districts for first year

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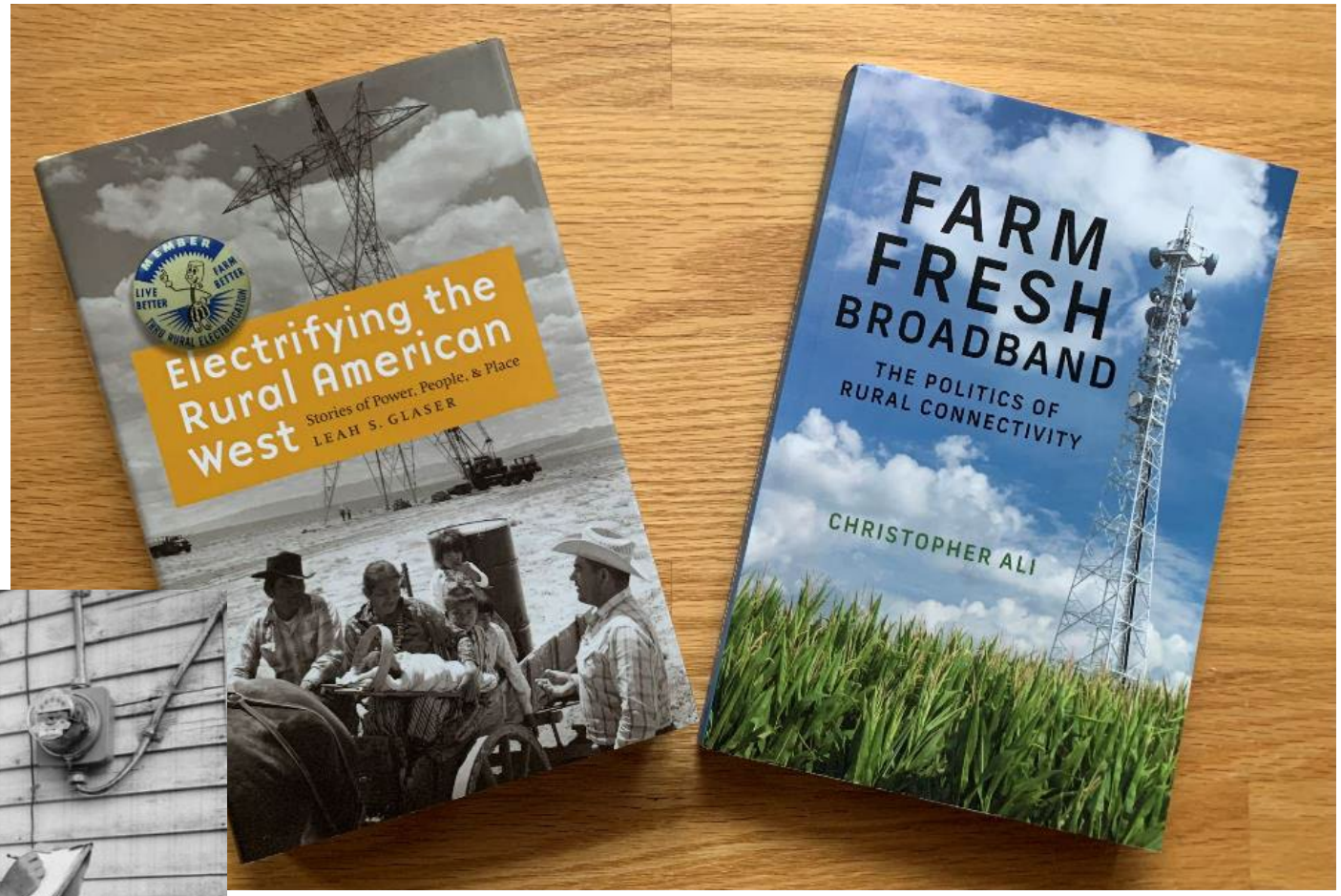
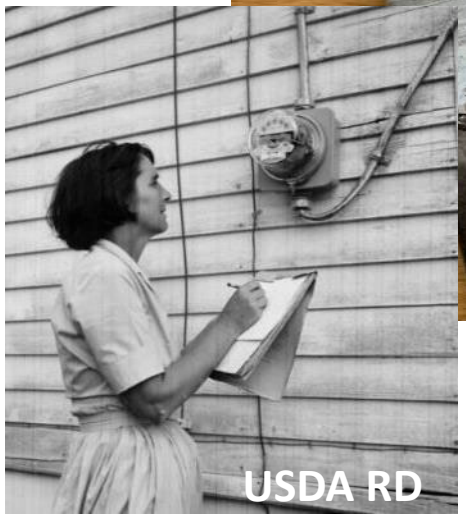
Have we seen this movie before?





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Preparing for the Broadband Investment Era

Set ambitious targets statewide

- Establish progressive broadband thresholds –> 100 Mbps up & down
- Develop long-term broadband mapping capability
- Maximize availability & adoption
- Integrate sustainability & accountability
- Open access for predominantly publicly funded network assets
- Workforce development

Develop strategic regional approaches

- Leverage Broadband Action Teams (BATs)
- Develop rich, accurate mapping data
- *Fiber first* designs as they are the most future-proof investment, but integrate fixed wireless and LEO satellite where needed
- Consider public private partnerships (P3s)
- Invest in more Internet exchanges (hardened locations, fiber interconnection)
- Identify middle-mile fiber gaps and resiliency risks

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Faster Internet Oregon

FASTER INTERNET OREGON

www.FasterInternetOregon.org

Launches May 16, 2022

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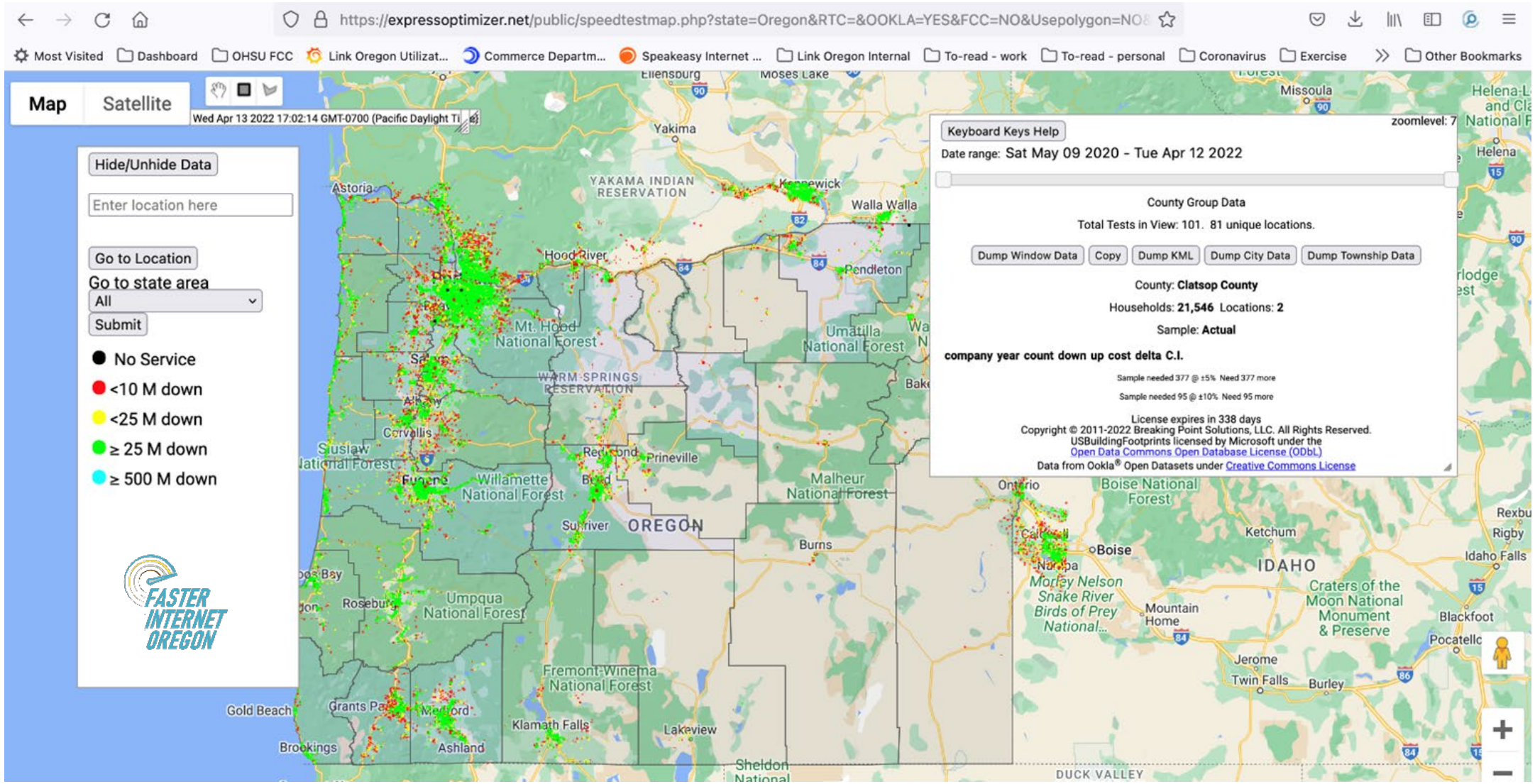
Faster Internet Oregon



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Oregon Tribal Broadband Summits

- The Oregon Tribal Broadband Summit series convenes Oregon Tribal leaders and IT staff, state and federal agency representatives, and experts from higher education
  - Discuss practical strategies for identifying successes and roadblocks
  - Develop sustainable broadband infrastructure initiatives led by the Tribes
- Community of practice to establish trusted partnerships and advance digital equity and access for Tribal communities
- Three OTBS summits have taken place thus far:
  - Dec 2021, Mar 2022, & Apr 2022 (OBO Listening Session)
- Oregon Tribal Broadband Bootcamp (www.tribalbroadbandbootcamp.com) scheduled for August 2022 at University of Oregon, Eugene
- Contact info@linkoregon.org for OTBS updates and announcements

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THANK YOU

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LINK OREGON
WASHINGTON
PACIFIC OCEAN
IDAHO
CALIFORNIA
NEVADA
10,000 ft
7,500
5,000
2,500
0
WARRENTON/ ASTORIA
MANZANITA (S)
NEDONNA BEACH
PACIFIC CITY (3)
FLORENCE
BANDON
Hillsboro
OHSU
Portland
Portland State University
The Dalles
Boardman
Pendleton
La Grande
Baker City
Ontario
Vale
Boise
Burns
Prineville
Bend
Maupin
State of Oregon (EIS)
Salem
Oregon State University
Corvallis
Newport
University of Oregon
Eugene
Roseburg
Chemult
Grants Pass
Medford
Ashland
Klamath Falls
Fiber Broadband Routes
Current Service Locations
Link Oregon Founding Entities
Technical & Regional Universities
Link Oregon Connected School Districts
Commercial Data Center Concentrations
Transoceanic Cables
Transoceanic Cable Landing Points

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Link Oregon Statewide Access Locations

#	Site Name	Site Type	Colocation Provider
1	**Arlington**	Optical Only	Zayo
2	**Ashland**	Internet / MPLS / Optical	Southern Oregon University
3	**Baker City**	Internet / MPLS / Optical	Windwave
4	**Bend (ODOT)**	MPLS / Ethernet Satellite	State of Oregon (ODOT)
5	**Bend (Vault)**	Internet / MPLS / Optical	TDS One Neck
6	**Boardman**	Optical Only	Zayo
7	**Boise (Idaho)**	Internet / MPLS / Optical	Lumen (Internet2/IRON)
8	**Burns**	Internet / MPLS / Optical	Lumen
9	**Central Point**	Optical Only	Hunter
10	**Chemult**	Optical Only	Lumen
11	**Clackamas**	Optical Only	Clackamas ESD
12	**Corvallis (OSU Kerr)**	Internet / MPLS / Optical	OSU
13	**Corvallis (OSU PASC)**	Internet / MPLS / Optical	OSU
14	**Drain**	Optical Only	Hunter
15	**Drewsey**	Optical Only	Lumen
16	**Durkee**	Optical Only	Lumen
17	**Eugene (UO Oregon Hall)**	Internet / MPLS / Optical	UO
18	**Eugene (WIX)**	Internet / MPLS / Optical	Lane Council of Governments
19	**Fish Lake**	Optical Only	Hunter
20	**Glendale**	Optical Only	Hunter
21	**Grants Pass**	Internet / MPLS / Optical	Hunter
22	**Hermiston**	Internet / MPLS / Optical	Intermountain ESD
23	**Hillsboro**	Internet / MPLS / Optical	Flexential
24	**Klamath Falls**	Internet / MPLS / Optical	Hunter
25	**La Grande (EOU)**	MPLS / Ethernet Satellite	Eastern Oregon University
26	**La Grande (Lumen)**	Optical Only	Lumen
27	**Madras**	Optical Only	Lumen
28	**Maupin**	Optical Only	Lumen
29	**Medford (Lumen)**	MPLS / Ethernet Satellite	Lumen
30	**Medford (SOESD)**	MPLS / Ethernet Satellite	Southern Oregon ESD
31	**Millican**	Optical Only	Lumen
32	**Modoc Point**	Optical Only	Lumen
33	**Newport**	Internet / MPLS / Optical	OSU (Hatfield Marine Science Center)
34	**Oakridge**	Optical Only	Lumen
35	**Ontario (Lumen CO)**	MPLS / Ethernet Satellite	Lumen
36	**Ontario (Lumen ILA)**	Optical Only	Lumen
37	**Parkdale**	Optical Only	Zayo
38	**Pendleton (IMESD)**	Internet / MPLS / Optical	Intermountain ESD
39	**Pendleton (Lumen CO)**	MPLS / Ethernet Satellite	Lumen
40	**Portland (Northrup)**	Optical Only	Lumen
41	**Portland (Pittock)**	Internet / MPLS / Optical	Pittock Block
42	**Portland (PSU FAB)**	Internet / MPLS / Optical	PSU
43	**Riley**	Optical Only	Lumen
44	**Roseburg**	Optical Only	Douglas Fast Net (Hunter)
45	**Salem (Revenue Building)**	Internet / MPLS / Optical	State of Oregon (Dept. of Revenue)
46	**Salem (State Data Center)**	Internet / MPLS / Optical	State of Oregon (EIS)
47	**Sandy**	Optical Only	City of Sandy (Sandy Net)
48	**Seattle (Westin Bldg/SIX)**		Seattle Internet Exchange (SIX)
49	**Sunriver**	Optical Only	TDS BendBroadband
50	**The Dalles (City Hall)**	MPLS / Ethernet Satellite	City of The Dalles (Q-Life)
51	**The Dalles (Zayo ILA)**	Optical Only	Zayo
52	**Vale**	Optical Only	Lumen

"Any opinions, findings, conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Networking and Information Technology Research and Development Program."

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