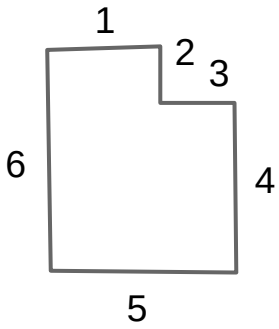
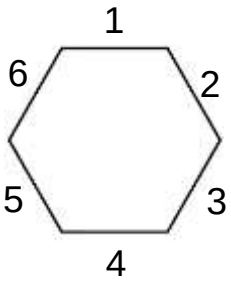
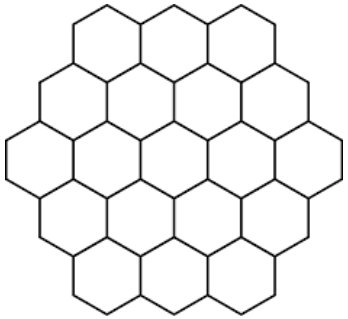
Beehive Mapping Update





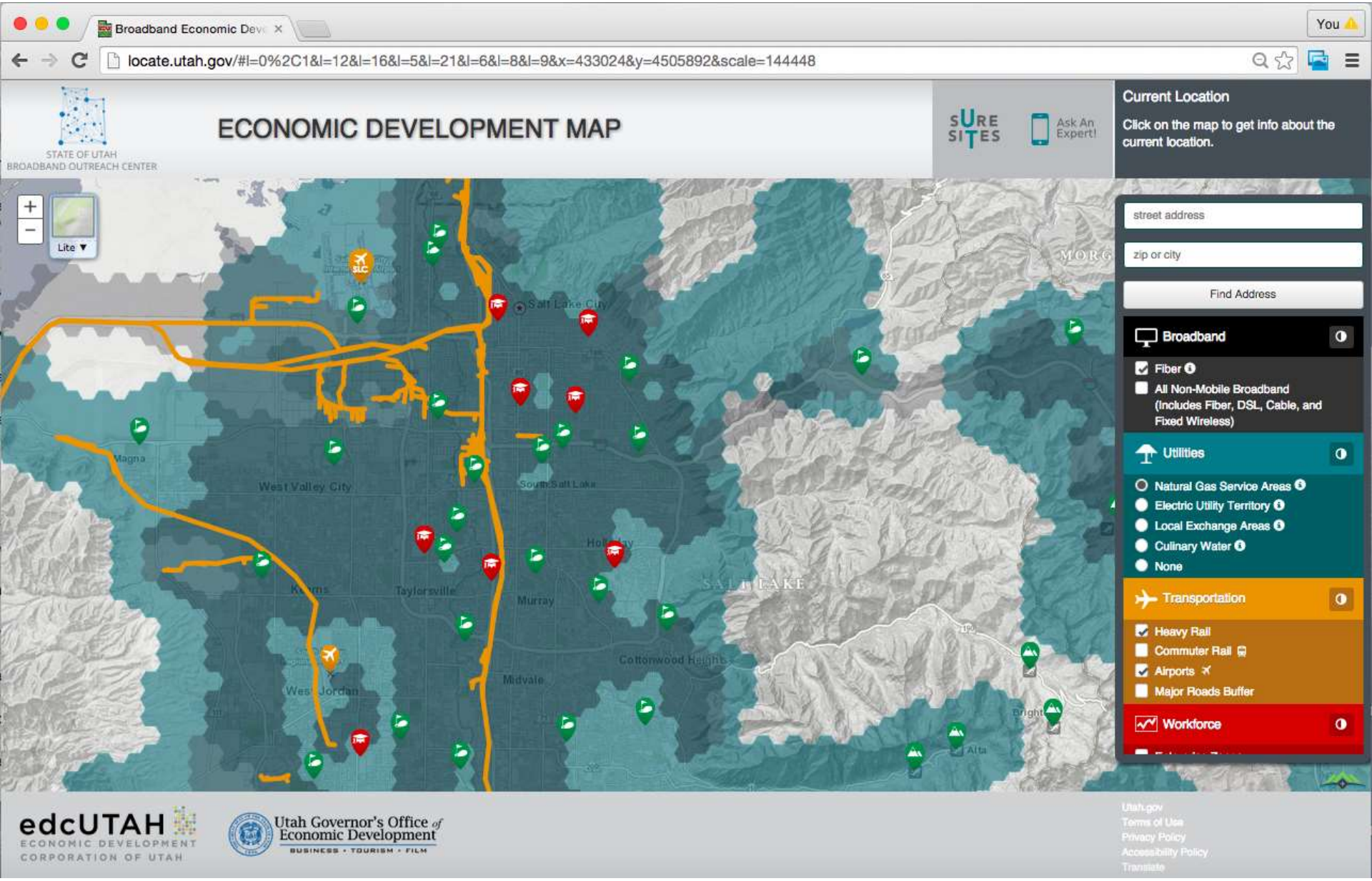


locate.utah.gov
statewide high-res imagery
plss stewardship

Bert Granberg, Utah AGRC

locate.utah.gov

Center for Digital Government Awards

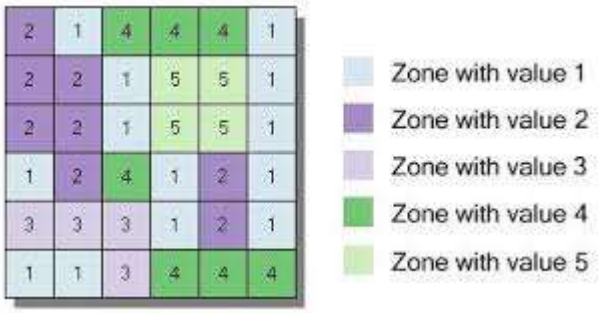


Utah Mapping & Information Partnership (UMIP)

Priority #1 Statewide High Resolution Imagery

Completeness: Important Questions

- What is the value of a pixel?



- How much can a pixel afford to pay?

IFTN, 3DEP, NG911, Address Points, FirstNet ….

Statewide 6” High Resolution Imagery

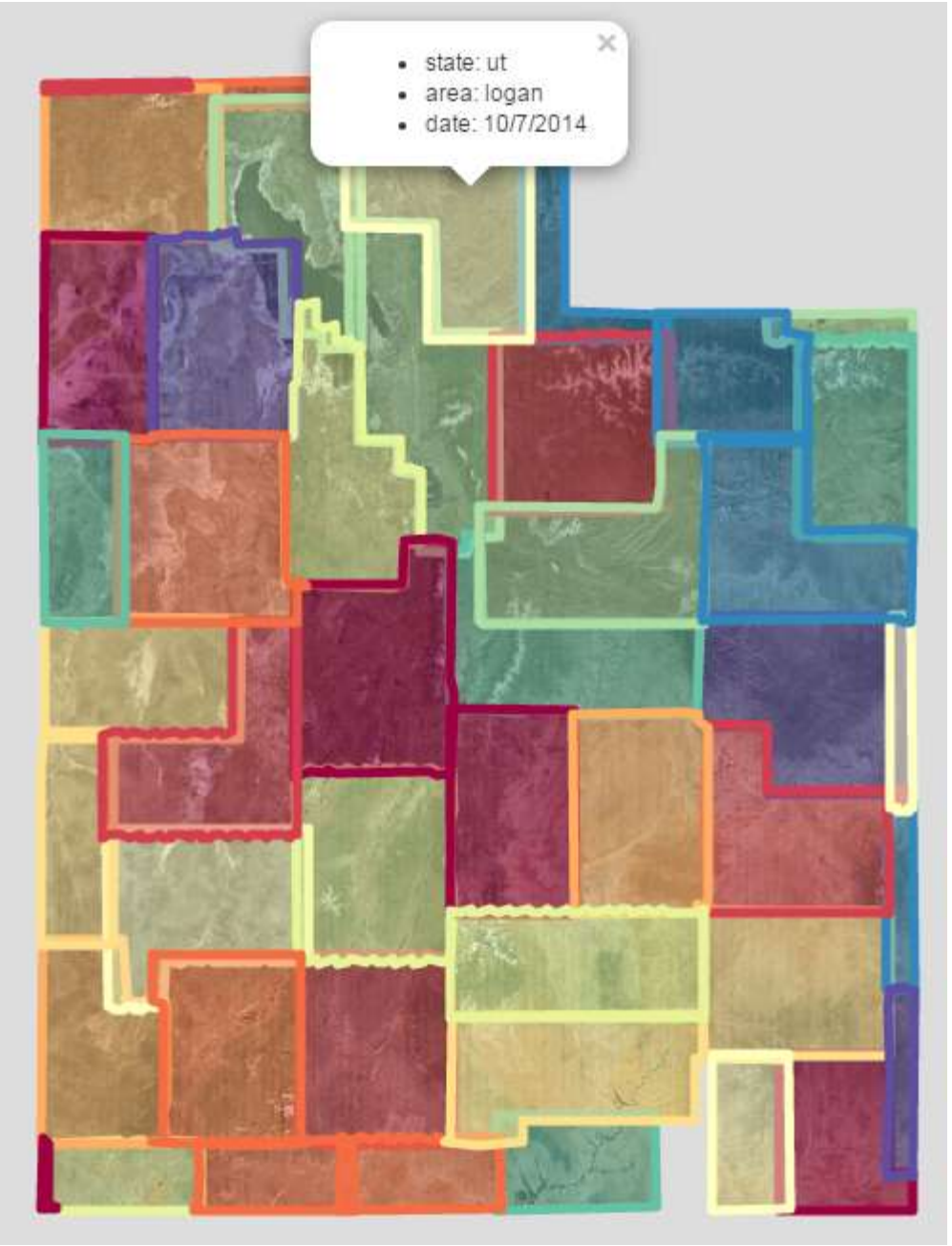
Google Contract:

$988,451 upfront
$12.70 / mi2

Hosted imagery services

Licensed use: State, Local, Tribal, contractors, & partners

Right to purchase updates in 2016 & 2017



what we want, from what they fly

[Registering to Use]:

1a. Organization & Primary Contact

1b. Addition info from Contractors or Partners*

2. Informational Items and Terms of Service

3. On-Premise Files Request*

4. Acknowledgement & Digital Signature

Organizational Usage Agreement, Google Imagery License

For the State of Utah's Google High Resolution Aerial Photography License (DTS#0152):

The following agreement is required for all qualifying organizations to use the Utah license to Google's high resolution imagery.

Organizations (state departments or divisions, counties, cities, contractors, etc) need only complete the agreement once, and it is suggested this be done by a designated primary contact (GIS manager, CAD lead, mapping apps project manager, etc).

Contractors and partners need only fill out this agreement if access to the service is desired outside of an immediate licensee's physical facilities or network.

Email contact information collected will only be used to provide updates regarding the imagery terms of service, changes to imagery content, or notices regarding the imagery web services.

PART 1: Organization and Primary Contact (Required)

Organization: *

Primary Contact First and Last Name: *

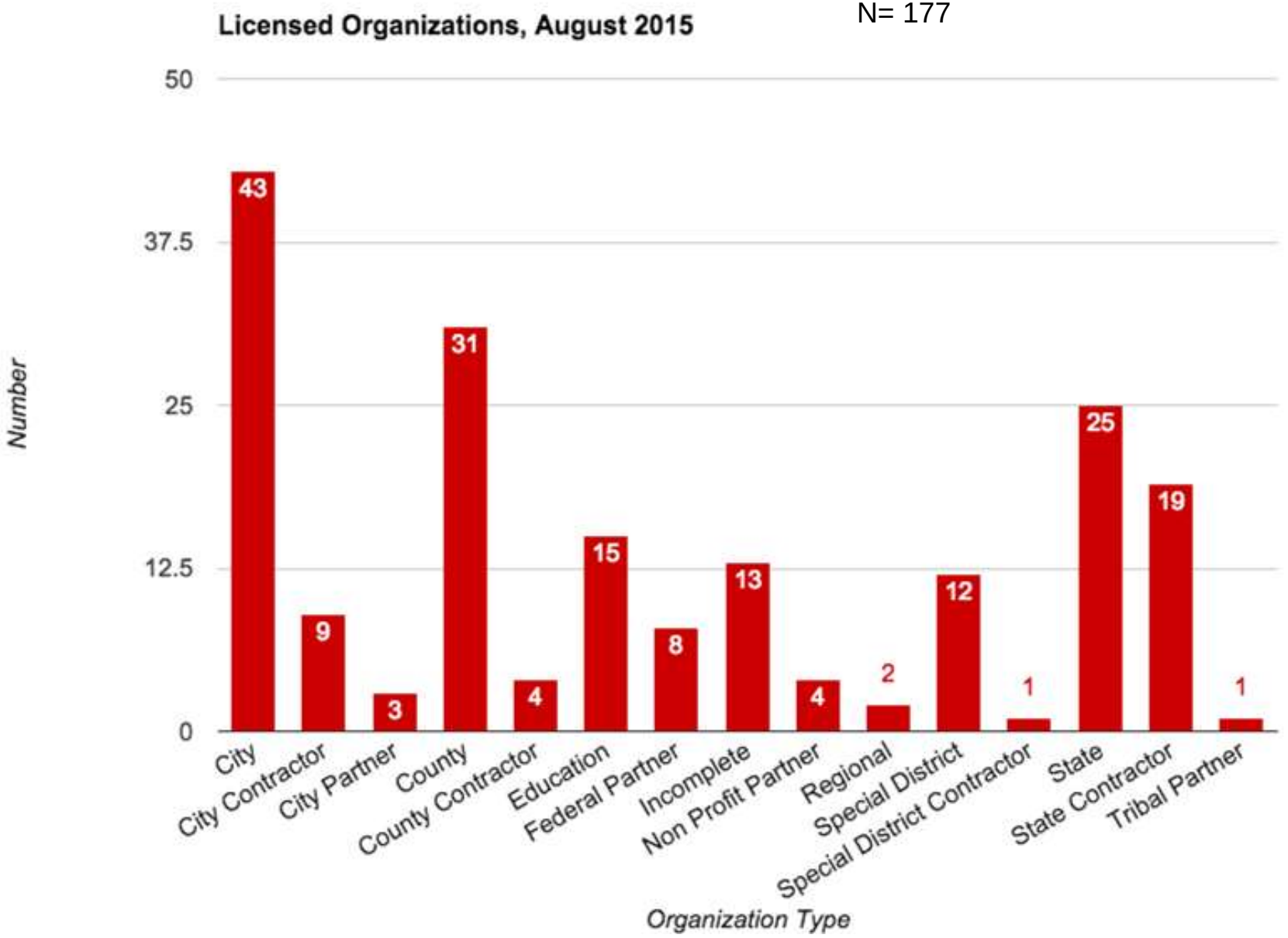
Primary Contact Email *

Primary Contact Phone: *

PART 1b: Additional Information for Contractors and Partner Organizations (Required if Applicable)

If not state, regional, local or tribal government, public safety communications center, K-12, or

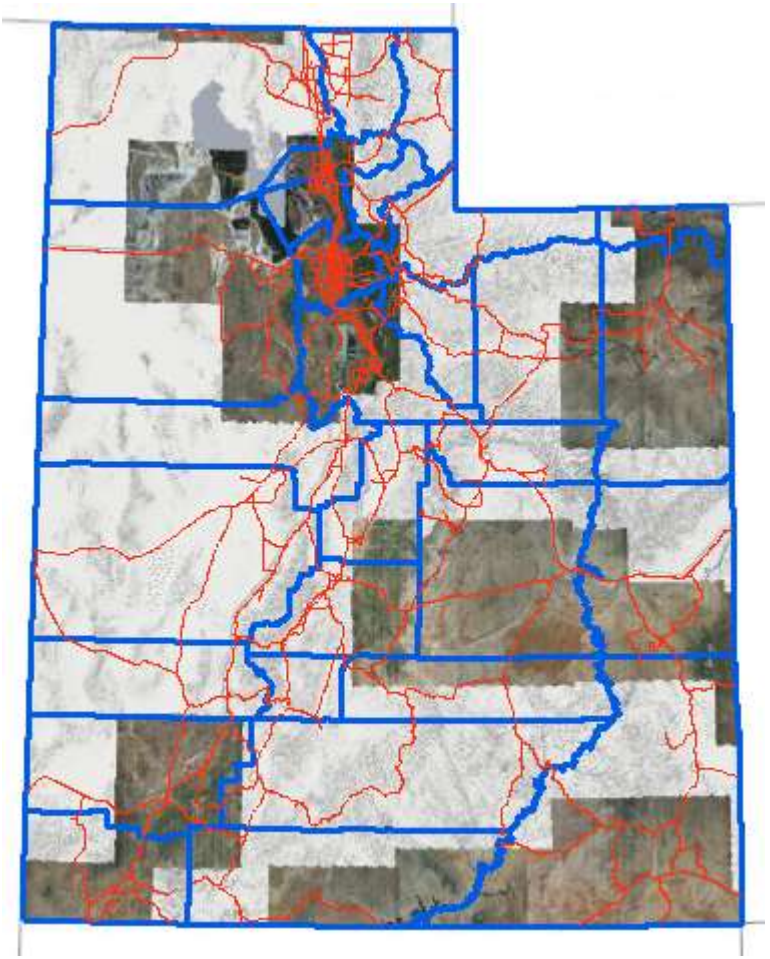
N= 177


Licensed Organizations, August 2015
Number
50
37.5
25
12.5
0
43
9
3
31
4
15
8
13
4
2
12
1
25
19
1
City
City Contractor
City Partner
County
County Contractor
Education
Federal Partner
Incomplete
Non Profit Partner
Regional
Special District
Special District Contractor
State
State Contractor
Tribal Partner
Organization Type

2015 updates are included in license purchase:.

Expected updates, at a minimum are:

~37% of the state (31K mi2)



Utah Imagery Appliance in GCP
Monthly Operating Costs 2015

GCP storage w/ Level 20 tiles (@23 TB)	$575
Bandwidth (@100 GB)	$13
Google Compute Engine hosting	$250
Server operating system	$0
Managed application & services (AppGeo)	$416
Application database (BigQuery users & logs)	$1
GCP storage credits (estimated)	$-200

Total	$1055

Draft

High-Res Aerial Photography

***Accomplished*:**

- Funding raised
- License purchased
- 177 organizations onboard
  - online signup
  - usage measured
- Image service appliance
  - GME engine deprecation
  - Custom NodeJS web service = scaling & inexpensive operations
- Download capability
- On premise distribution

***Next Steps*:**

- 2015 updates
- Business model for 2016 and 2017 updates
- ROI study
- Additional outreach
- Add public domain imagery & base maps?

group	data	requests
utah	49.83 GiB	768,620
county	37.01 GiB	688,908
sub	251.96 GiB	673,142
dnr	59.46 GiB	536,872
city	32.21 GiB	372,944
higher_ed	20.01 GiB	166,909
udot	15.00 GiB	56,778
appgeo	6.75 GiB	30,610

High Res Digital Orthophotography

Paradigm change...

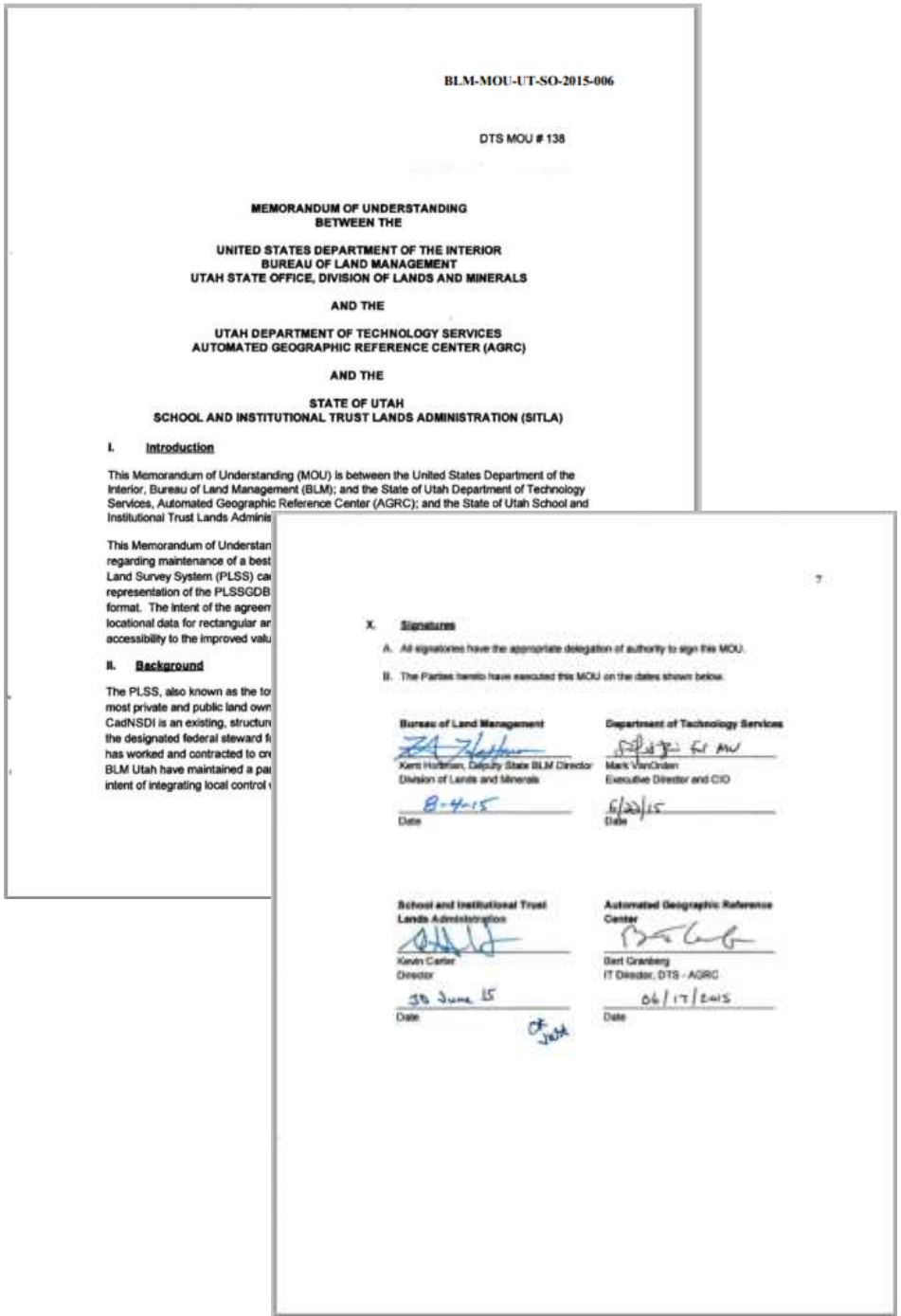
USGS is A-16 theme lead…

USDA has the MVP

Is it in the national interest to revisit IFTN??

BLM, AGRC, SITLA MOU

- State stewardship of Public Lands Survey System section corners
- Corrections and added precision
- Database integration to keep public land boundaries map layer in sync.



BLM-MOU-UT-SO-2015-006

DTS MOU # 138

MEMORANDUM OF UNDERSTANDING
BETWEEN THE

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE, DIVISION OF LANDS AND MINERALS

AND THE

UTAH DEPARTMENT OF TECHNOLOGY SERVICES
AUTOMATED GEOGRAPHIC REFERENCE CENTER (AGRC)

AND THE

STATE OF UTAH
SCHOOL AND INSTITUTIONAL TRUST LANDS ADMINISTRATION (SITLA)

I. Introduction

This Memorandum of Understanding (MOU) is between the United States Department of the Interior, Bureau of Land Management (BLM); and the State of Utah Department of Technology Services, Automated Geographic Reference Center (AGRC); and the State of Utah School and Institutional Trust Lands Adminis

This Memorandum of Understan
regarding maintenance of a best
Land Survey System (PLSS) ca
representation of the PLSSGDB
format. The intent of the agreem
locational data for rectangular ar
accessibility to the improved valu

II. Background

The PLSS, also known as the to
most private and public land own
CadNSDI is an existing, structur
the designated federal steward f
has worked and contracted to cr
BLM Utah have maintained a pa
intent of integrating local control

X. Signatures

A. All signatories have the appropriate delegation of authority to sign this MOU.

B. The Parties hereto have executed this MOU on the dates shown below.

Bureau of Land Management
Kent Hoffman, Deputy State BLM Director
Division of Lands and Minerals
8-4-15
Date

Department of Technology Services
Mark VanOrden
Executive Director and CIO
6/30/15
Date

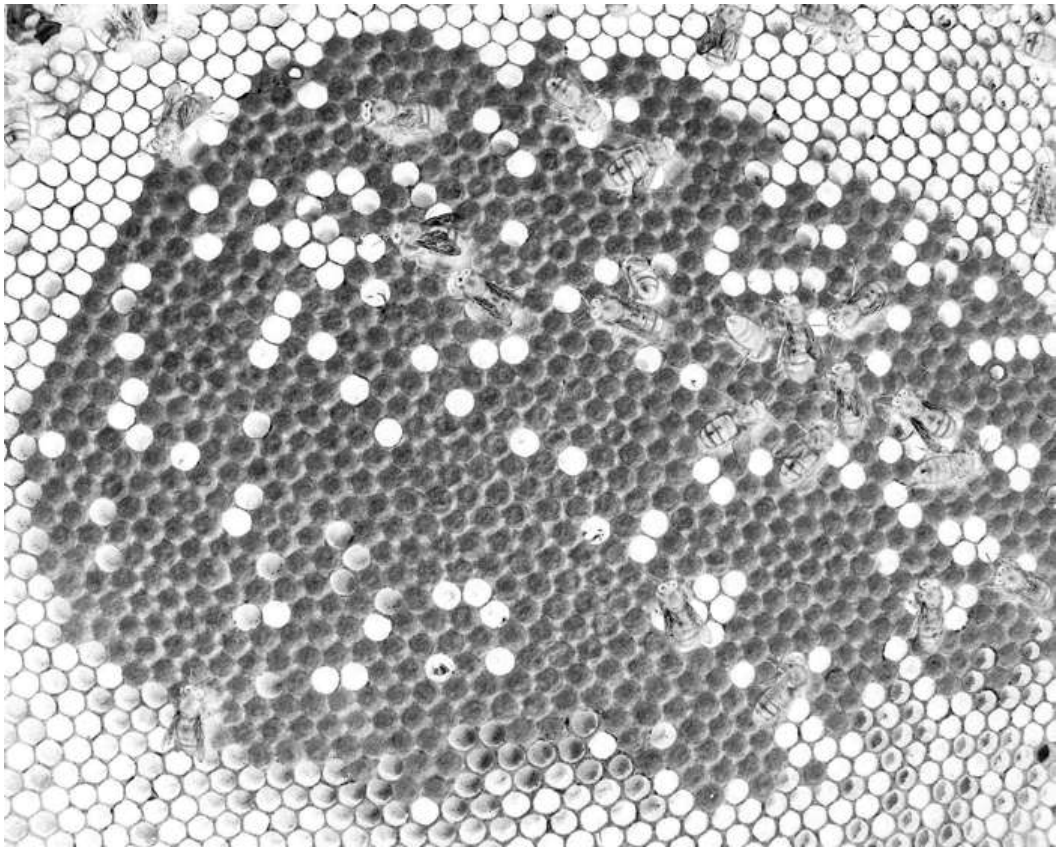
School and Institutional Trust Lands Administration
Kevin Carter
Director
30 June 15
Date

Automated Geographic Reference Center
Bert Granberg
IT Director, DTS - AGRC
06/17/2015
Date

Status: Signed August 4th
Next step: Begin data PLSS section corner migration in partnership with BLM, SITLA, ESRI, & Premier Data (BLM Contractor)

10N 5E
AR92 Road
9N 5E
AR92A Road
170 Road
AR92B Road
AR171 Road
Lewis Ridge/Dean Hollow Road
AR93 Road
AR11 Road
AR13 Road
9N 6E
= ½ mile

discover □ manage □ communicate



Utah AGRC
gis.utah.gov