

# State of Utah e-Government Strategic Plan: Baseline

## Introduction

A comprehensive baseline of Utah e-Government is a significant undertaking. This document provides a baseline of what the State looks like today as it delivers e-government. This assessment will focus heavily on the utah.gov portal and its related services and cooperative development strategy with agencies. The baseline consists of the following overall components:

**E-Government Portal Baselines:** This assessment looks at Utah e-government portals, operational and performance statistics, comparisons with other states, and specialized e-government portal offerings.

**E-Government Services Baselines:** This section looks at State online services offered through the utah.gov portal and other agency Web sites. The assessment also considers local and federal government services with a Utah specific focus. The baseline looks at government services from a citizen-centric perspective without organizational boundaries.

**Metrics and Adoption Rates for e-Government Services:** Sample adoption rate data has been reviewed from three agencies, as has adoption rate data compiled by Utah Interactive, Inc. (UI), the contractor for the Utah.gov portal.

**Legislative Baseline for Utah e-Government:** This section addresses key legislation that has facilitated the development of e-government in Utah.

**e-Government Marketing Baseline:** This section includes: awards; conferences and tradeshow; association and agency newsletter articles; speaking engagements; press releases; education; marketing collateral; Web site marketing; and traditional marketing activities.

**Technology Baseline:** The technology baseline examines design elements; infrastructure, at UI and the State; data and information systems; and search capabilities.

This baseline is not intended as a comprehensive review of all e-government services on a detailed level, but it does look carefully at services available to the public on government Web sites. Hence, this baseline takes a citizen-centric perspective. No comprehensive attempt has been made to assess e-government services that are internally facing, or restricted to government to government uses.

## e-Government Portal Baseline

### Utah e-Government Portals

The State of Utah provides a primary portal to e-government services at [www.utah.gov](http://www.utah.gov) and sub-portal locations that are linked from that site.

### Utah.gov

Utah.gov is the main State portal site, and based upon site data from Alexa and Compete, the site has some very positive usage statistics. Data from both of these sources is consistent and seems to accurately represent current site user characteristics. Compete reports 727,555 unique visitors to the site in 2006. Visitors to the site were up 42.1% over 2005. These visitors viewed an average of 17.9 pages per visit and stayed at the site for an average of 10+ minutes. Pages viewed, and duration of each visit to the site, indicate that visitors are finding and using content that may meet some of their government information needs.

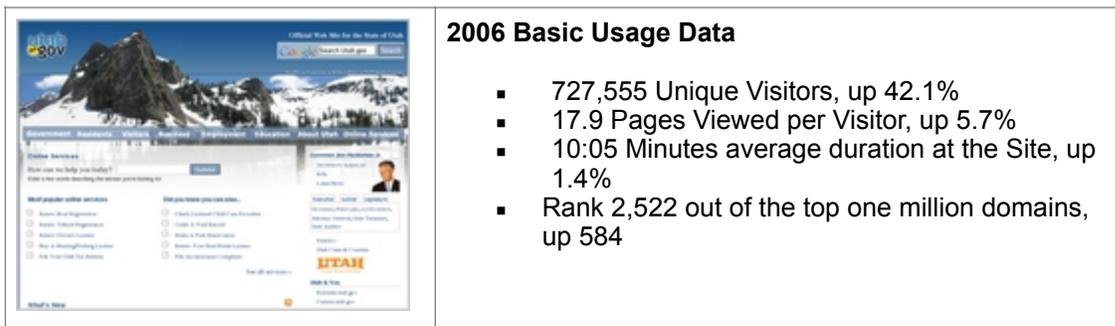


Figure 1. Utah.gov Usage Data Summary

Alexa<sup>1</sup> provides detailed information on traffic rank, daily reach, and daily page views for utah.gov, and provides an opportunity to view detailed graphic representations of utilization data. The Alexa data provides confirmation of the information trends and direction reported by Complete, and provides comparative information with other sites.

The traffic rank is based on three months of aggregated historical traffic data from users and is a combined measure of page views and users (reach). The rank of a site reflects both the number of users who visit that site as well as the number of pages on the site viewed by those users. Smaller rank trend numbers reflect higher utilization relative to other sites.

<sup>1</sup> Alexa: Traffic Analysis Utah.gov at [http://www.alexa.com/data/details/traffic\\_details?url=www.utah.gov](http://www.alexa.com/data/details/traffic_details?url=www.utah.gov)

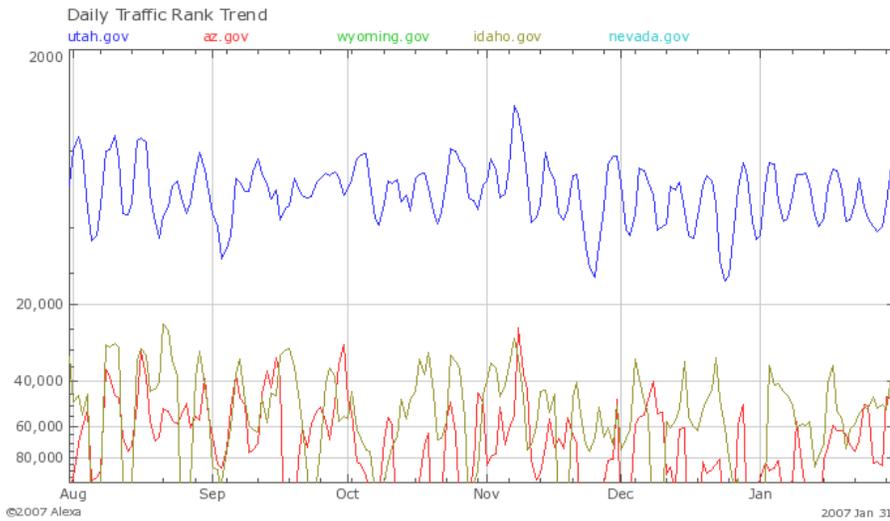


Figure 2. Daily Traffic Rank Trend Comparisons for Five States

Reach measures the number of users. Reach is typically expressed as the percentage of all Internet users who visit a given site. Reach is expressed as number of users per million.

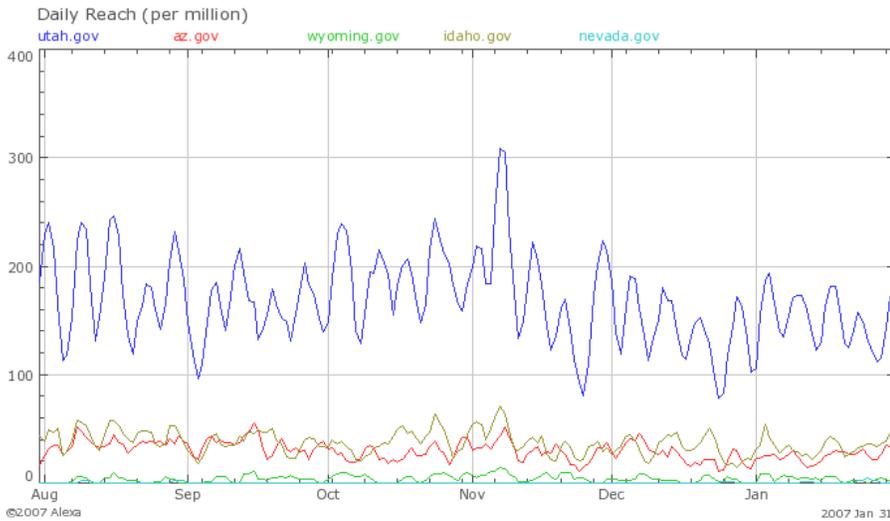


Figure 3. Daily Reach (per million) Comparisons for Five States

Page views measure the number of pages viewed by users. Multiple page views of the same page made by the same user on the same day are counted only once. The page views per user numbers are the average numbers of unique pages viewed per user per day by the users visiting the site.

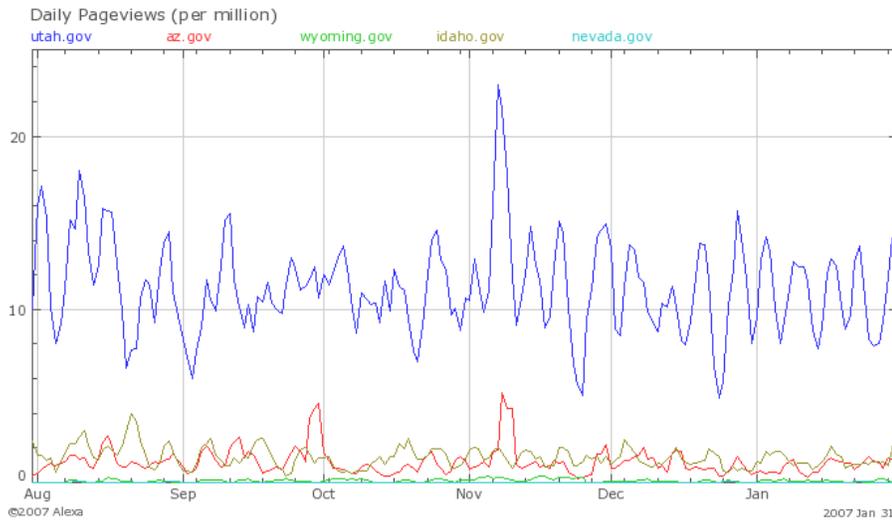
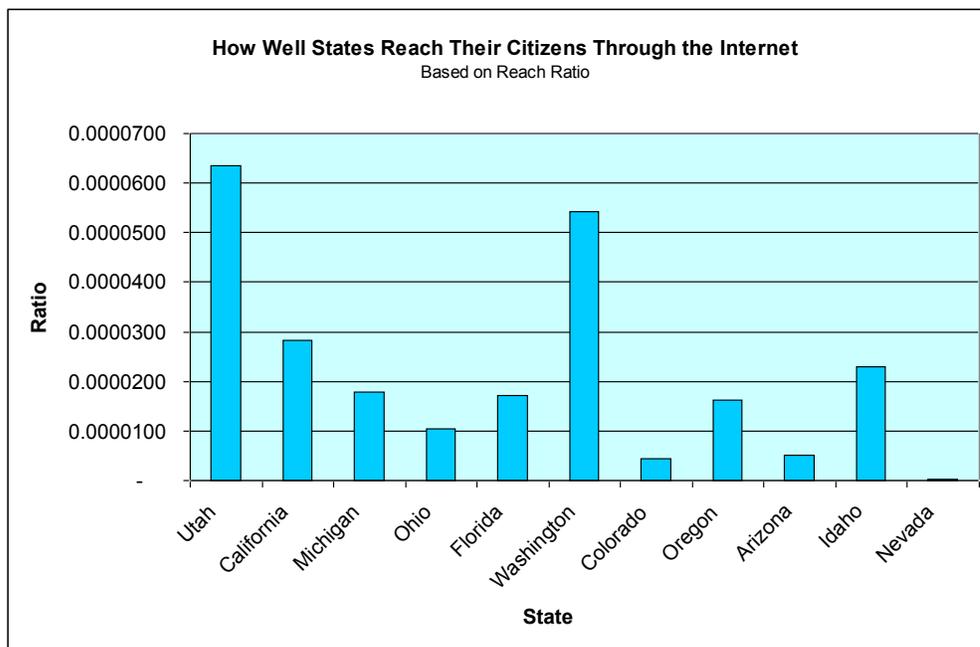


Figure 4. Daily Page View Comparisons for Five States

### Comparisons with Other States

To assess how Utah is doing with key measurements such as reach and duration of stay at the Utah.gov site, it is useful to make comparisons with other state government portal sites. Figure 5 shows comparative data for reach, and Figure 6 depicts comparable data for duration, or time spent at government Web sites.

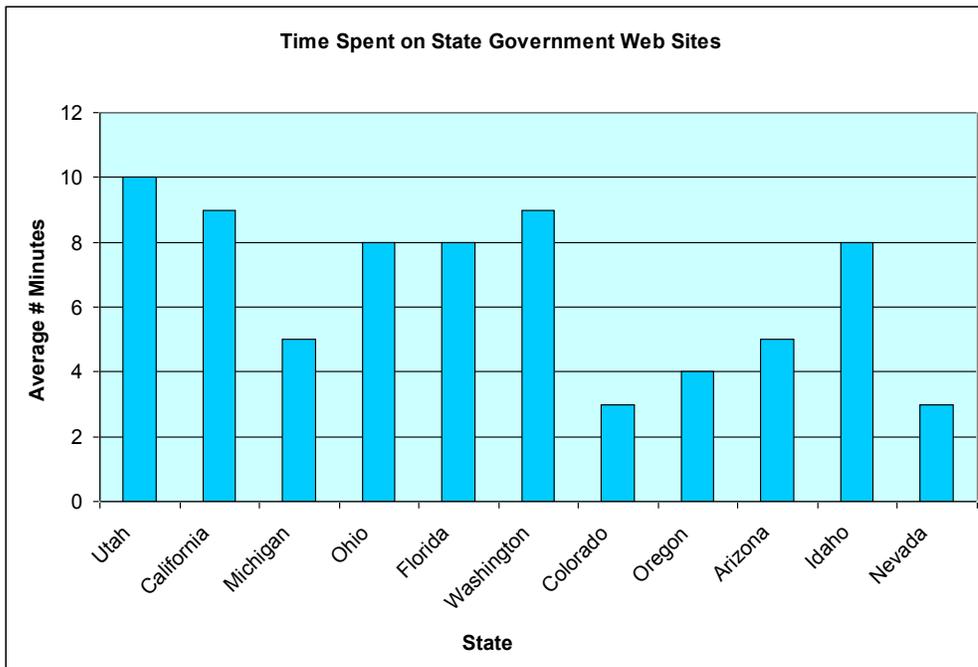


Data source: alexa.com

Figure 5. Citizen Reach Ratio's on State Government Web Sites

Once citizens access a State Web site, it is also important to understand what they are looking for, if they are able to locate the service or information, and how much interest

they have in the site. An indicator of that is the duration of stay. Figure 6 compares how long the average user stays on utah.gov compared to sites for other states.



Data Source: Compete.com

Figure 6. Time Spent on State Government Web Sites

### Specialized e-Government Portals

The State offers a rich array of specialized content sub-portals that are linked directly from the utah.gov home page. These portals provide a wide array of information for scenario based users, such as Utah business, travel, legal, careers, and rural Utah. Portals are also available for groups with special needs, such as youth, seniors, and Spanish speaking populations.

Figure 7. Business.utah.gov

#### Your source for doing business in Utah

- Starting a Business
- Running a Business
- Relocating a Business
- Closing a Business

Figure 8. Careers.utah.gov



**Utah's Career Connection**

- Investigate Careers
- Explore Education and Training
- Find a Job

Figure 9. Rural.utah.gov



**Dedicated to facilitating business growth and economic vitality in Utah's rural communities.**

- Communities
- Environment
- Networks

Figure 10. Justforyouth.utah.gov



**Services and Information for Youth**

- Education, Housing, Transportation
- Pregnancy and Parenting
- Social and Legal
- Healthy Living, Food and Nutrition
- Substance Abuse and Mental Health
- Foster Youth and Parenting

Figure 11. Seniors.utah.gov



**Information for Seniors and Caregivers**

- Financial and Legal Issues
- Nutrition and Care Services
- Health, Medical and Safety
- Employment
- Housing and Living Arrangements

Figure 12. Español.utah.gov

	<h3>A resource for the Spanish speaking Hispanic community of Utah</h3> <ul style="list-style-type: none"> <li>Living, Residents, and Visitors</li> <li>Working, Employment</li> <li>Learning and Education</li> <li>Information about Utah</li> </ul>
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Figure 13. Legal.utah.gov

	<h3>Legal Industry Online Services</h3> <ul style="list-style-type: none"> <li>Searches</li> <li>Tax Payments</li> <li>Filings</li> <li>Utah Courts Information</li> </ul>
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Figure 14. Helpyourneighbor.utah.gov

	<h3>Information about volunteer opportunities in your community</h3> <ul style="list-style-type: none"> <li>Volunteer Opportunities</li> <li>Traditional Community Services</li> <li>Emergency Preparedness and Prevention</li> </ul>
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Figure 15. Travel.utah.gov

	<h3>Utah Life Elevated</h3> <ul style="list-style-type: none"> <li>Plan your Utah Vacation</li> <li>Travel Guides and Publications</li> <li>Recreational Opportunities</li> <li>Utah Events Calendar</li> </ul>
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Figure 16. www.le.state.ut.us



## Utah State Legislature

- Legislators and Committees
- Bills and Publications
- Constitution and Utah Code
- Senate and House
- Citizen's Guide

## E-Government Services Baselines

Online services available to Utah citizens constitute a wide array of information and services. The current Utah.gov portal site is focused largely on services from agencies developed in cooperation with UI and many other agency sponsored applications and Web sites. A detailed inventory of these services is available separately in the *Utah e-Government Baseline Application Inventory*.

### State Online Services

The State currently has identified and listed 618 online services in the following categories:

- Business                    266 Services
- Citizen                     304 Services
- Employee                 13 Services
- Intergovernmental     35 Services

The distribution of these services is illustrated in Figure 17. Services for citizens account for the largest area of emphasis with 304 services, or 49% of total services. Business focused services follow with 266 services, or 29% of the total. Intergovernmental services follow with 35 services or 6%. Services that focus on primarily on State employees include 13 services, or 2%. A number of these services serve multiple audiences. This analysis looks only at the primary focus of the service. A detailed listing of the services by agencies is available in the *e-Government Baseline Application Inventory*.

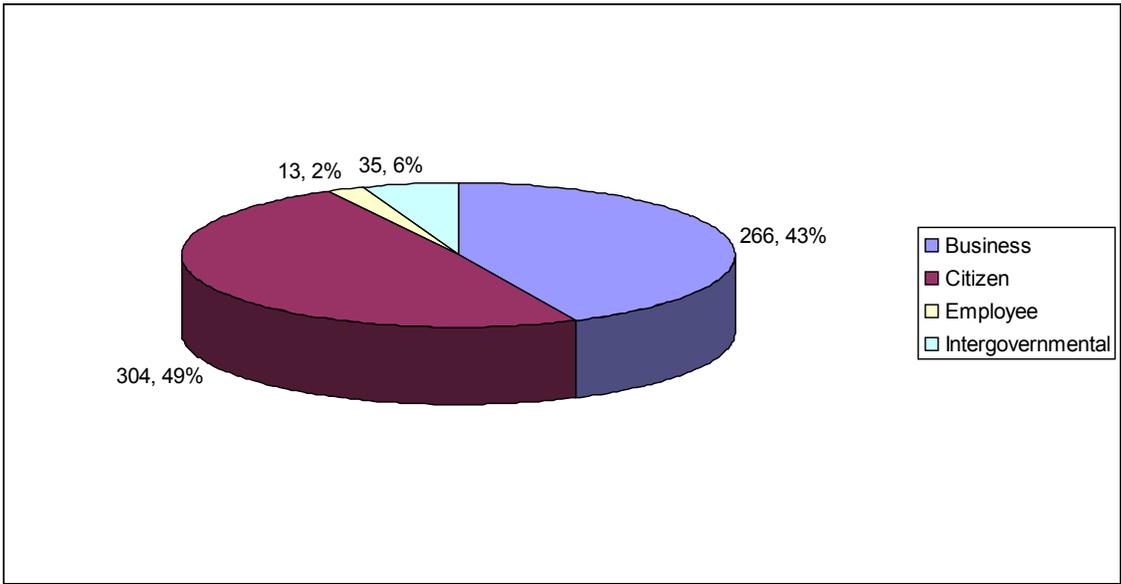


Figure 17. Distribution of Utah e-Government Services by Primary Customer Focus

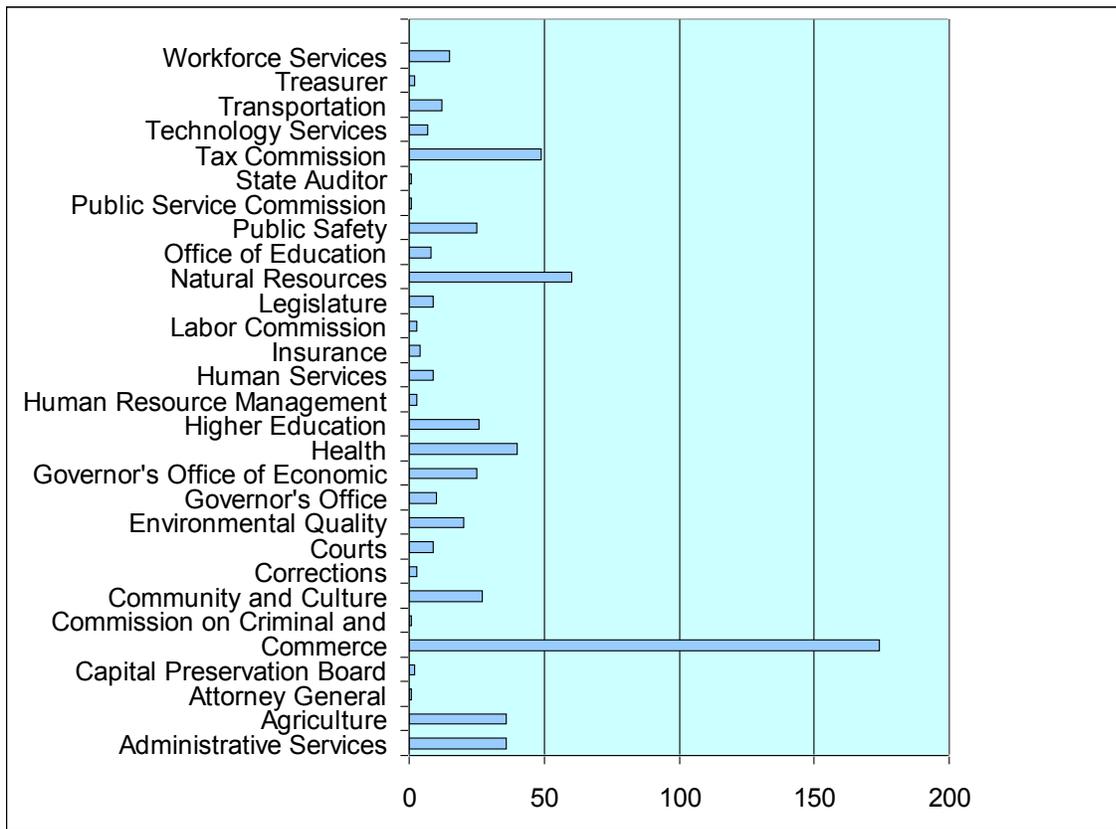


Figure 18. Distribution of all Utah e-Government Services by Agency

**UI Online Services**

Table 1 lists the applications developed by UI by agency and provides a listing of what services are available today and from which agencies. Some of the services are used by multiple agencies, and these have also been identified. There are also a series of services that are enterprise in scope.

Table 1. UI e-Government Applications by Agency

<b>UI Applications by Agency</b>	
<b>Agriculture and Food</b>	
	Agriculture and Food License Renewal
<b>CIO's Office</b>	
	eGov Summit Web Site
<b>Commerce</b>	
	Annual Business Renewal (ABR)
	Business Entity Certificate of Existence
	Business Entity List (BEL)
	Business Entity Search (BES)

Business Name Availability Search  
Business Registered Principal Search  
Central Filing System  
Commerce Data Web Service  
Company Licensing Renewal System  
Principal Search by Business Entity  
Professional Licensing Renewal  
Registered Notary Search  
Uniform Commercial Code (UCC) Certified Searches  
Uniform Commercial Code (UCC) Continuations  
Uniform Commercial Code (UCC) Filing  
Uniform Commercial Code (UCC) List  
Uniform Commercial Code (UCC) Search  
Uniform Commercial Code (UCC) Terminations

**Commerce: Occupational and Professional Licensing**

Professional Licensing Look-up and Verification  
Community and Economic Development and State History  
Historical Society Marketplace

**Davis County Treasurer**

Davis County Property Tax Payments

**Department of Health**

Children's Health Insurance Program (CHIP) Online Application  
Children's Health Insurance Program (CHIP) Online Application Renewal

**Dept. of Human Service: Division of Aging and Adult Services**

Seniors.Utah.gov, Seniors Portal

**Dept. of Insurance**

Dept. of Insurance, Captive Insurers Web Site

**Dept. of Public Safety: Utah Highway Patrol**

Utah Highway Patrol Safety Inspection (UHPSI)

**Dept. of Transportation**

Express Lanes (HOV Use Stickers)  
UDOT Utah GovPay Implementation

**Division of Air Quality**

Div of Air Quality Online Payments

**Division of Real Estate**

Real Estate License Renewal

**Enterprise**

Authorization Web Service  
Automated Forms Submission System (AFSS)  
Calendar System  
Digital Certificate Gateway Module  
Interactive Voice Response (IVR)  
Payment Engine  
Payment Engine Web Service, Version 4.1  
Press Release System  
UtahGovPay, Web Payment Service

**Environmental Quality: Radiation Control**

Radiation Control Nuclear Generator Permits

**Environmental Quality: Water Quality**

Storm Water Permitting System

**Government Management Information Sciences: Utah Chapter**

GMIS Symposium Web Site and Registration Form

**Governor's Office**

Utah.gov

**Governor's Office of Economic Development**

Governor's Office of Economic Development: Event Registration/Payment

**Health**

Social Services Volunteer Directory (ODHS)

**Health: Primary Care Network**

Primary Care Network (PCN) Online Application

**Health: Vital Records**

Vital Records Payments

**Human Services**

Dept of Human Services: Office of Recovery Services

**Insurance**

Insurance Company and Agent Search (CAS)  
Online Shopping Cart, Insurance Code Book Sales

**Lt. Governor**

Online Voter Registration

**Lt. Governor: State Elections**

Lobbyist Registration and Reporting  
Lobbyist Search

**Lt. Governor's Office**

Lt. Governor's Web Site

**Provo City**

Provo Business License Renewal

**Public Safety**

Driver License Renewal

Driver Record Search (MVR)

Motor Vehicle Registration (MVR) Batch Web Service

Motor Vehicle Registration Web Service

**Sandy City**

Sandy City Online Employment Application

**State of Utah**

24/7 Live Help

Alerts.Utah.Gov

CIO Website

Help Your Neighbor

iGov

Lt. Governor's Web Site

News.Utah.Gov

Utah: First Lady's Web Site

Utah Interactive Partner Web Site

**State Treasurer's Office**

Unclaimed Property Lookup

**Tax Commission**

Aircraft Registration System

IFTA/IRP Online Payments

Impound Vehicle

Impound Vehicle Tow Company Entry

Motor Vehicle Title, Lien and Registration Search (TLR)

Payment Express

Payment Processor, Motor Vehicle Enforcement Division (MVED)

Personalized License Plate Lookup

Renewal Express: On The Spot Training Web Site

Renewal Express: On-The-Spot

Sales Tax Filing System (TC61)

Sales Tax Filing System (TC71)

Special Events Sales Tax Licensing

Tax Express Tax Filing

Vehicle Renewal, Renewal Express

Watch Your Car

**Tooele County Treasurer**

Property Tax Payments, Tooele County

**University of Utah**

Online Tuition Payments, University of Utah

**Utah County Treasurer**

Property Tax Payments, Utah County

**Utah Office of Education**

Educator License Renewal

**Utah Valley State College**

UVSC Vehicle Emissions Validation

**Weber County**

Weber Marriage License

**Weber State University**

Online Tuition Payments, Weber State

**Wildlife Resources**

Agent Hunting and Fishing License Online (AHFLO): iPOS

Hunting and Fishing License Online (HFLO)

Land Use Permitting Online

**Work Force Services; Education**

Careers.Utah.gov, Career Portal

**Multiple Agencies**

*Commerce, Corporations; Tax Commission; Work Force Services; Environmental Quality; Labor Commission; Provo City; Sandy City; Salt Lake City; Logan City; Internal Revenue Service (Federal)*

One Stop Business Registration (OSBR)

*Community and Economic Development; Commerce; Work Force Services; Tax Commission; Administrative Services, Environmental Quality*

State Construction Registry (SCR)

Business.utah.gov, Business Portal

## Local Services

Local and county governments provide a wealth of information about communities and community services that are highly relevant to citizens. Utah.gov is in the process of integrating access to this information from the State portal site. The State has 29 county Web sites. There are 498 cities within the State. The Utah League of Cities and Towns lists 240 incorporated cities. These cities have in excess of 130 Web sites that provide information and services on a community level. At present there is no single reliable source for all known Web sites for Utah Cities and towns. Coverage is provided as follows:

- Utah League of Cities and Towns<sup>2</sup>      132 Web Sites
- Utah.gov<sup>3</sup>    105 Web Sites
- Pioneer Government Information<sup>4</sup>      92 Web Sites

Each of these site listings include some cities that are not repeated on other site lists so the actual number of city sites is larger than any of the current listings. Information available from these sites is characterized in Figure 19. A detailed inventory of these sites and services is available separately in the *Utah e-Government Baseline Application Inventory*.

(Insert Figure- What do we want to show with this figure?)

Figure 19. Types of Information and Data from Local Government Web Sites.

## Federal Services with a Utah Focus

The federal government provides a wealth of data and information that deals specifically with Utah. The intent of Utah.gov is to integrate access to this information from the State portal to provide citizens with a seamless view of relevant information from government, irrespective of organizational origins. The State has currently identified **XX** federal sites with Utah specific information and data. Figure 20 characterizes the types of information available from federal Web sites. A detailed inventory of these sites and services is available separately in the *Utah e-Government Baseline Application Inventory*.

(Insert Figure)

Figure 20. Types of Information and Data from Federal Government Web Sites

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<sup>2</sup> Utah League of Cities and Towns, *Links to Utah City and Town Home Pages*, at <http://www.ulct.org/ULCTLeg.nsf/vMultiLevelLookup/01FFBA0EA151114B8725703500710F59?OpenDocument>

<sup>3</sup> *Utah.gov City and County Information* at <http://www.utah.gov/government/citycounty.html>

<sup>4</sup> Utah State Library. *Pioneer Government Information* at [http://pioneer.utah.gov/government\\_information/CityAndCountyWebSites.html](http://pioneer.utah.gov/government_information/CityAndCountyWebSites.html)



## Metrics and Adoption Rates for e-Government Services

Agencies have maintained online service adoption data with varying degrees of completeness. UI has maintained transactional data for years, but adoption data requires a view from both user and utilization perspectives. Agencies are measuring adoption as new services are rolled out. Adoption highlights reported by a number of agencies include:

- Utah Department of Commerce<sup>5</sup>:
  - Thirty percent of transactions have been moved online, allowing the Department to re-allocate resources.
  - The Division of Occupational and Professional Licensing increased online renewal to nearly 80% of 150,000 professional licensees, which is one of the highest among State online applications.
  - The Division of Corporations and Commercial Code now offers over 75% of its services online to better serve the business community and the citizens of Utah.
    - One stop Business Registration—21.52% Adoption Rate
    - Certificates of Existence—92.2% Adoption Rate
    - Annual Business Renewal—27.56% Adoption Rate
    - UCCI—57.27% Adoption Rate
    - UCC2—89.96% Adoption Rate
    - UCC3—52.3% Adoption Rate
- Department of Workforce Services<sup>6</sup>:
  - Utah is a national leader in Internet services offered to its nearly 65,000 registered employers.
  - Employers using online services grew from 17.4% last year to 35% this year.
  - Employees served online by DWS have grown substantially:

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<sup>5</sup> Utah Department of Commerce Annual Report: 2006 at <http://www.commerce.utah.gov/report06.pdf>

<sup>6</sup> Utah Department of Workforce Services, jobs.utah.gov Annual Report: 2006 at <http://jobs.utah.gov/edo/annreport/ar2k6/ar2006.pdf>

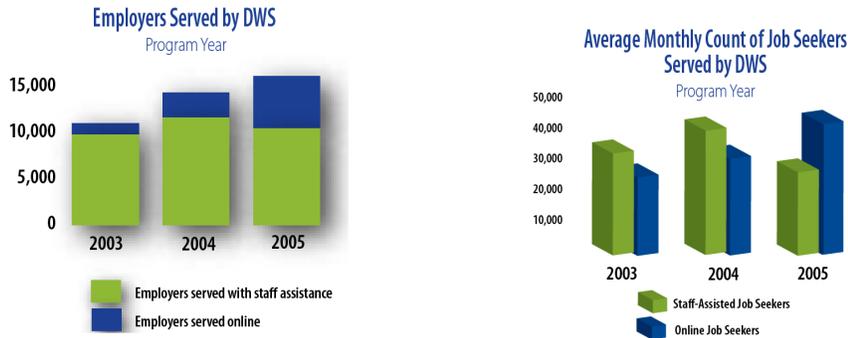


Figure 21. Workforce Services Employers and Job Seekers Served On-line

- Utah State Tax Commission<sup>7</sup>:
  - Last year electronic filing options were used by 51% of those who filed a State income return, and 24% of motor vehicle renewals were completed online.
  - Most tax payments and motor vehicle fees can be made electronically.
  - Online research tools and forms make tax information more accessible to the public and employees.
  - Figure 22 shows the growth in the number of income tax returns filed and motor vehicle registrations processed.

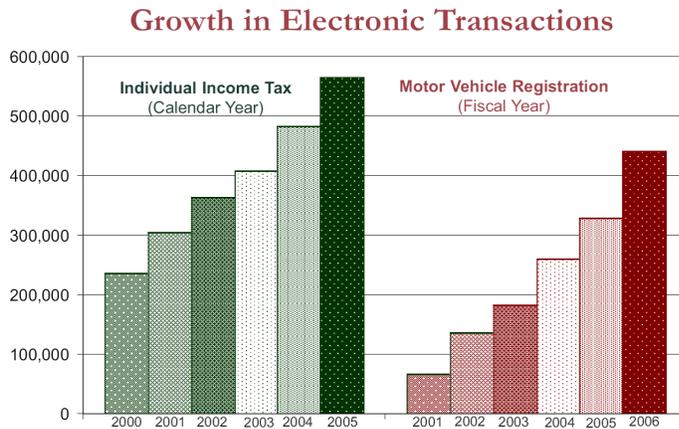


Figure 22. Utah State Tax Commission, Growth in Electronic Transactions

Utilization trends for applications across all agencies are generally on an upward trend, indicating growing adoption rates and acceptance by users. Transactional data from UI shows a similar upward growth trend.

### UI Adoption Data

Adoption data currently tracked by UI is summarized in Table 2 for a number of agencies. Trend lines for adoption are generally increasing for most applications. The

<sup>7</sup> Utah State Tax Commission Annual Report: 2006 at <http://www.tax.utah.gov/research/reports/fy06report.pdf>

data reflects statistics for phone and over the counter transactions and online transactions for each service. Total transactions and an adoption rate for online services have been calculated. UI, in cooperation with other agency customers, is developing adoption tracking for all practicable application implementations.

Table 2. UI Adoption Rates by Agency and Application

<b>Department of Commerce Adoption Statistics 2006</b>	
<b>Division of Real Estate</b>	
<b>Online Real Estate License Renewal</b>	
Total Phone/Mail/Over the Counter Transactions	4,816
Total Number of Online Transactions	5,166
Total Transactions	9,982
Online Adoption	52%
<b>Division of Occupational and Professional Licensing</b>	
<b>DOPL Verifications</b>	
Total Number of Phone/Mail/Over the Counter Transactions	3,494
Total Number of Online Transactions	919
Total Transactions	4,413
Online Adoption	21%
<b>Professional License Renewal</b>	
Total Number of Phone/Mail/Over the Counter Transactions	8,679
Total Number of Online Transactions	49,541
Total Transactions	58,220
Online Adoption	85%
<b>Division of Corporations and Commercial Code</b>	
<b>Certificates of Existence</b>	
Total Number of Phone/Mail/Over the Counter Transactions	715
Total Number of Online Transactions	11,434
Total Transactions	12,149
Online Adoption	94%
<b>Annual Business Renewal</b>	
Total Number of Phone/Mail/Over the Counter Transactions	84,326
Total Number of Online Transactions	63,900
Total Transactions	148,226
Online Adoption	43%
<b>Uniform Commercial Code Filings</b>	

Review Draft 2.13.2007

Total Number of Phone/Mail/Over the Counter Transactions	11,358
Total Number of Online Transactions	14,050
Total Transactions	25,408
Online Adoption	55%
<b>Uniform Commercial Code Continuation Filings</b>	
Total Number of Phone/Mail/Over the Counter Transactions	2,012
Total Number of Online Transactions	2,257
Total Transactions	4,269
Online Adoption	53%
<b>Uniform Commercial Code Termination Filings</b>	
Total Number of Phone/Mail/Over the Counter Transactions	3,797
Total Number of Online Transactions	5,907
Total Transactions	9,704
Online Adoption	61%
<b>Uniform Commercial Code Certified Searches</b>	
Total Number of Phone/Mail/Over the Counter Transactions	282
Total Number of Online Transactions	953
Total Transactions	1,235
Online Adoption	77%
<b>OneStop Online Business Registration</b>	
Total Number of Phone/Mail/Over the Counter Transactions	31,499
Total Number of Online Transactions	12,246
Total Transactions	43,745
Online Adoption	28%
<b>Registered Principal Search</b>	
Total Number of Online Transactions	31,007
<b>Registered Principal Search Through Business Entity Search</b>	
Total Number of Online Transactions	152,867
<b>Business Name Availability</b>	
Total Number of Online Transactions	282,077

Table 3: OSBR FY 2007 Adoption Stats by Agency

<b>OSBR FY 2007 Adoption Stats by Agency</b>		
<b>Division of Corporations</b>		
	<b>YTD</b>	<b>AVG</b>
In-House Filings	21,527	3,075

Online Filings	7,251	1,036
Total Filings	28,778	4,111
	25.20%	25.20%

**Department of Workforce Services**

	YTD	AVG
In-House Filings	4,436	370
Online Filings	1,715	429
Total Filings	6,151	1,538
	27.88%	27.88%

**Tax Commission**

	YTD	AVG
In-House Filings	7,452	1,242
Online Filings	7,838	1,306
Total Filings	15,290	2,548
	51.26%	51.26%

**Salt Lake City**

	YTD	AVG
In-House Filings	830	166
Online Filings	103	21
Total Filings	933	156
	11.04%	13.25%

Found through OSBR 49

**Sandy City**

	YTD	AVG
In-House Filings	116	29
Online Filings	92	23
Total Filings	208	30
	44.23%	44.23%

**e-Government Marketing Baseline**

Adoption of e-Government services is driven by awareness and marketing. The public has to know that services exist. Utah.gov has a substantial amount of brand equity and public awareness based upon ongoing marketing and communication activity. The Utah.gov marketing summary<sup>8</sup> for 2006 included:

**Awards Submitted**

<sup>8</sup> Utah Interactive, Inc., 2006 Utah.gov Marketing Summary, February 7, 2007.

- Council of State Government Innovations Award
- GovMark Council's "GovMark" Awards
- Government Solutions Center's Pioneer Awards
- Center for Digital Government's "Best of the Web" State Portal Category
- Center for Digital Government's "Best of the Web" Digital Government Achievement Category
- National Association of State Chief Information Officer's (NASCIO) "Recognition Awards"
- Government Customer Support Excellence Awards

#### **Awards Won**

- First Place—Government Customer Support Excellence Awards, Technical Excellence
- Fourth Place—Center for Digital Government, Digital States Survey
- Fifth Place—Brown University Study
- First Place—Center for Digital Government, Government to Citizen (On the Spot)
- Third Place—Center for Digital Government, Best of the Web
- A Minus—National Policy Research Council (NPRC), e-Gov Report Card

#### **Conferences and Tradeshow Attended**

- The 98<sup>th</sup> Annual Utah Bankers Association Convention
- Spring Utah State Bar Convention
- Annual Utah State Bar Convention
- Utah State Bar Fall Forum
- Utah Business Licensing Association Conference
- Government Management and Information Systems (GMIS) Conference
- Annual Government Customer Support Conference

#### **Association and Agency Newsletter Articles**

- Utah State Bar Newsletter—SCR Update
- Construction Industry Newsletters—SCR Update
- Utah Business Licensing Association Newsletter—OSBR Update
- Utah Highway Patrol Newsletter—Safety Inspection Information (two articles)
- Real Estate Division Newsletter—Real Estate License Renewal Information

#### **Utah.gov Insider—Began a Quarterly Subscriber Newsletter**

- Sent four times.
- Sent to 3,400 subscribers (power Utah.gov users).

#### **Speaking Engagements**

- Fall Forum Guest Speaker
- Guest Speaker at Annual Government Customer Support Conference
- Guest Speaker at annual EGov Summit

### **EGov Summit**

- Vendor Participation
- Assisted in Coordination

### **Press Releases**

- TaxExpress—Beginning of Filing Season
- TaxExpress—End of Filing Season
- Renewal Express—Boat Renewals
- UCC Search—Promoted Upgrades
- ABR—Promoted Enhancements

### **Education**

- There were 54 State Construction Registry training sessions given across the state to the construction industry.
- There were nine recruiting sessions given across the state to entice stations to join the On the Spot program.
- There were 16 two hour On the Spot training sessions given across the state to train various stations to use On the Spot.
- There was an On the Spot price point study which was posted on [onthespot.utah.gov](http://onthespot.utah.gov).

### **Marketing Collateral**

- There were 100 On the Spot banners designed, produced, and distributed.
- There were 200 On the Spot posters designed, produced, and distributed.
- There were 400 On the Spot flyers designed, produced, and distributed.
- There was an Annual Business Renewal mailing insert sent to 10,000 businesses.
- There was an Annual Business Renewal direct mailing sent to high volume filers.
- There was an On the Spot photo shoot with Kevin Park and an OTS station for use in future advertising collateral.
- The Renewal Express packet was redesigned.
- Validate announcement flyers were distributed at the UBA conference to attendees.
- There were 1,100 personalized letters sent to all UHP safety inspection stations.

### **Web Site Marketing**

- The Utah.gov subscriber page was updated to promote the benefits of a Utah.gov account.
- An On the Spot marketing Web site was created containing marketing ideas, studies, collateral, and online training and certification.

### **Traditional Advertising**

- TaxExpress newspaper ads were run in six student newspapers over the course of the income tax filing season for a total of six days each.
- A public service announcement was submitted to NPR for TaxExpress.

- Boat renewals were promoted on [www.utahoutdoors.com](http://www.utahoutdoors.com).
- Boat renewals were promoted on the KSL radio channel.

## Technology Baseline

The technology baseline for Utah e-government has been broken into five key technology areas:

- **Design Elements:** How does utah.gov compare with best practices for design attributes commonly expected of Internet sites?
- **Infrastructure:** What is current technology utilized by utah.gov to provide government services?
- **Data and Information Systems:** What data resources are available for e-government in Utah to provide services and information to citizens?
- **Search Capabilities:** What search functionalities are currently available to help citizens find government information?

### Design Elements

Google Analytics<sup>9</sup> provides useful baseline information about about how users are accessing the Utah.gov Web site and this data has many implications for design, site optimization, and the types of services that citizens will be able to effectively use. The current baseline for key Web design parameters follows:

- *Browser Versions:* Internet Explorer and Firefox account for 96.57% of all browser access (IE 85.59%, Firefox 10.98%, and all others 3.43%).
- *Platform Versions:* Windows and Macintosh account for 99.69% of all user platforms (Windows 96.02%, Macintosh 3.67%. and all others .31%).
- *Screen Resolutions:* Higher user screen resolutions account for 88.9% of all user access (1024x768, 52.73%; 1280x1024, 14.90%; 800x600, 11.10%, and all other higher resolutions account for 21.27%)
- *Screen Color Resolution:* High resolution 32 bit display was by far the most common user screen setting (32-bit, 86.87%; 16-bit, 10.15%; 24-bit, 2.57%; and all other resolutions account for .41%)
- *Languages:* The visitor language preference setting of choice for site visitors was English (English, 98.35%; Spanish, .3%, and all other languages were 2.35%).
- *Java Enabled:* Visitors that had Java enabled on their browsers accounted for 99.59% of all users with only .51% not having Java enabled.

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<sup>9</sup> Google Analytics for Utah.gov as of February 13, 2007 at: <https://www.google.com/analytics/home/report?rid=1421240et=&scid=827740>

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- *Flash Version:* Only 2.09% of site visitors did not have the ability to use Flash features, and 94.86% of site visitors had Flash 7 or greater enabled.
- *Connection Speed:* Site visitors, 89.99%, connected primarily at broadband connection speeds, and only 10.01% of users connect at dialup or unknown data speeds.

Applying this data, a typical site user: Connects at broadband speeds; has Flash and Java enabled; is English speaking; uses 32 bit screen color resolution; uses a base screen resolution of 1024 X 768 or greater; and uses a Windows operating system and an Internet Explorer browser. This would seem to imply an access environment with extensive capabilities to use advanced and graphic intensive web technologies and services. Only about 10% of all users require lower resolutions and slower connection speeds.

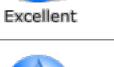
The data that follows was derived from a Sitescore assessment<sup>10</sup> of the Utah.gov Web site and provides a useful baseline for the effectiveness of key design elements on the site. Areas requiring the most significant attention are compliance with W3C Web accessibility guidelines. The speed assessment for the site is also of interest since it indicates a possible need to improve the capacity of the Web server environment for peak utilization periods.

Table 4. Baseline Detail for Utah.gov

 <p>Poor</p>	Speed	The Web site responded in 5.41 seconds, and the homepage downloaded in 5.82 seconds. This is acceptable during peak times, but may suggest that the Web server is struggling to keep up with capacity.
 <p>Very Poor</p>	Web Accessibility	All pages were found in violation of the current <a href="#">W3C Web Content Accessibility Guidelines</a> . (989 errors found over 25 pages.)
 <p>Good</p>	Use of Page Titles	<p>Some of the Web pages share the same title.</p> <p>Google and other search engines will not be able to easily determine the content within the different pages, and may mark the site down accordingly.</p> <p>Unique titles also help promote the Web site better for keywords specify inside them.</p>
 <p>Excellent</p>	Features	The following five features were specifically identified: Privacy policy, RSS feed, Web site map, News, and a Search facility. Generally, the analysis detected a very positive selection of text and features.

<sup>10</sup> Sitescore: Detailed Assessment of Utah.gov at [www.sitescore.silktide.com](http://www.sitescore.silktide.com)

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 Excellent	Size of Pages	Web pages are small and should display quickly.  The average Web page was 19k in size. The largest page was 39k, and the smallest 7k.
 Excellent	Links To	About 3,920 other Web sites were found linking to this Web site. (3920 quality links, out of 3920). The Web site is extremely well linked to.
 Excellent	No of Images	We found an average of 14.5 images per page.  There appears to be little variety in the images within this Web site (1.3 unique images per page).
 Excellent	Use of Style-sheets	A single page was found not using CSS (Cascading Style Sheets). This page is likely to be either very old or not well designed.
 Excellent	Table-based Layout	This Web site appears to use table-based layout for 4% of its pages. Ideally Web pages should be designed without the use of tables for layout.
 Excellent	Use of Fonts	The Web site used fonts appropriately. It uses Arial.
 Excellent	Use of forms	This Web site appears to make wide use of forms throughout.
 Excellent	Use of Frames	All Web pages were found to avoid the use of frames.
 Excellent	Web Site Icon	This Web site includes a “favorite” icon. This is a nice touch.
 Excellent	Use of Headings	All Web pages were found to be using HTML heading tags.
 Excellent	Annoying HTML	All Web pages appear to be free of blinking or scrolling text.
 Excellent	Amount of Text	
 Excellent	Use of Interactive Elements	The Web site does not appear to include any advert keywords in the source files and therefore displays correctly to the user with a spam blocker enabled.
 Excellent	Basic HTML Design	All Web pages were found to be using the basic HTML tags <html>, <head>, <title> and <body> and specified a DOCTYPE.

	No of Links	There are 145.8 links per page on the Web site. This amount is fine.
	Refresh Redirects	There were no refresh redirects on the Web site.
	Use of Audio	All web pages appear to avoid improper use of audio.
	Use of Advertising Keywords	The Web site does not appear to include any advertising keywords in the source files, and therefore displays correctly to users with an advertising blocker enabled.
	Use of Flash	This Web site appears to have no Flash elements. This is the safest choice for ensuring that the Web site can be viewed by everyone, although when used correctly a small amount of Flash is usually acceptable.

## Infrastructure Resources

### UI

At the highest-level, Utah Interactive has two redundant data centers, one hosted in the State data center in Salt Lake City, and the other at a Viawest data center in Denver. When the browser is pointed to <http://www.utah.gov/>, <https://secure.utah.gov/>, etc., it opens a connection in one data center or another based on round-robin DNS. Round-robin DNS is a technique for balancing the load between servers on the Internet that perform the same functions. This simple load balancing distributes traffic evenly across the data centers.

The data centers are virtually identical, in that Web content and Web applications are uniformly served out of both. The largest asymmetry is that hosts in Denver do not have direct access to State databases, and so usually connect to State data over an SSH tunnel, protocol that provides encrypted connections, executing on a Salt Lake City host.

There is a firewall (Cisco PIX 525) in each data center, and every inbound Web and non-Web TCP/IP packet is routed by the firewall to its internal destination host.

The servers in the data centers run a service stack consisting of: Apache on the front-end, Resin (lightweight Java app server) at the middleware tier, and MySQL on the back end.

All Web traffic to any utah.gov domain hosted by UI is routed to a host executing a locked-down Apache Web server. There is one Apache content switch in each data center. Since it is in an untrusted zone, this host does not actually store any content; instead, it simply operates as a primitive content switch and directs packets to application servers inside a trusted zone.

All static content and Web applications are served by trusted hosts executing the Resin Java servlet container program. There are five such application servers in Salt Lake City,

each with a corresponding host in Denver. New applications are released simultaneously to both data centers.

The application servers read and write data from State and/or local (i.e., managed by UI) databases. There are three database hosts in each data center; they all execute MySQL and data is replicated in real time between corresponding sets of tables to ensure uniform data availability across data centers.

UI also has a third production data center in a Viawest facility in Salt Lake City, which is used for internal and administrative functions only (e.g., source code control, email, DNS master, internal project management tools, and backup management nodes).

### **State Infrastructure**

State of Utah infrastructure<sup>11</sup> is currently composed of the following types of Web, application, and database hosting server environments in State data centers and agency data centers:

- *Web Servers:* (Apache, Microsoft IIS, Sun One, and Tomcat, are the primary Web server platforms)
- *Application Servers:* Apache, BEA Web Logic, JBoss, JRun, Oracle Application Server, Tomcat, Sun One, Sybase EA Server, Versata, and Web Sphere, as larger environments.
- *Database Hosting Environments:* ADABAS/Natural, DB2, Informix, Oracle, MS SQL, MySQL, Sybase and a number of other small database environments.

Application development environments are also diverse ranging from J2EE, .net, PowerBuilder, and numerous other specialized development platforms. Switching environments consist largely of Cisco technologies.

The State provides enterprise wide authentication services using Novell e-Directory branded as the Utah Master Directory (UMD) and Web site access control infrastructure using SiteMinder.

The current e-government technologies deployed by the State are supported by a wide range of technology choices and platforms that are a reflection of the many differences between how State agencies have made deployment and architecture decisions. This requires support for multiple integration patterns and technologies in making e-Government services available.

### **Data and Information Systems**

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<sup>11</sup> *IT Assessment Survey: Architecture and Information Systems*, June 30, 2005.

Data is one of the most valuable assets of any e-government initiative. The State of Utah has in excess of 817 information systems. Data and related information system resources identified in the IT Assessment Survey in June 2005 are listed in Table 5.

This data is limited to those executive branch agencies reporting to the CIO that participated in the survey. When other Executive, Legislative, and Judicial Branch agencies are included, there are an unknown number of additional information systems available. Taken together, this represents a rich data environment.

Table 5. Number of Databases/Information Systems by Agency

Agency/Department	Information Systems	Number and % of UI Services DB Use
Administrative Services	20	0, 0%
Agriculture	64	1, 1.6%
Alcohol and Beverage Control	16	0, 0%
Commerce	11	5, 0%
Community and Culture	41	0, 0%
Corrections	33	0, 0%
Environmental Quality	28	1, 0%
Financial Institutions	5	0, 0%
Governor's Office	15	2, 0%
Health	123	0, 0%
Human Resource Management	10	0, 0%
Human Services	120	0, 0%
Insurance	48	0, 0%
Labor Commission	1	0, 0%
Natural Resources	71	1, 0%
Public Safety	41	2, 0%
Tax Commission	60	5, 0%
Technology Services	19	1, 0%
Transportation	39	0, 0%
Workforce Services	52	0, 0%
<b>Total</b>	<b>817</b>	<b>18, 2.2%</b>

UI has accessed data from a number of different State databases in support of the online services that have been developed in cooperation with the State. Access to this data takes place in various ways depending upon agreements with agencies and consistent with State statutes.

Table 6. UI Access to Agency Databases<sup>12</sup>

Application Name	Database Name	Access Type
Agriculture License Renewal	Agriculture license data	Annual batch
Annual Business Renewal	Subset of LES database	Daily batch
Business Entity Lists, Registered Principle Search, Business Entity Search	LES database	Daily batch
Citation Monitoring	Driver database	Direct
Davis County Property Tax	Davis property tax data	Annual batch
DEQ Pay	Invoices	Periodic uploads
Educator License Renewal	CACTUS	Web service
Generator Site Access Permits	GSA database	Direct
Hunting and Fishing Licenses and Agent Hunting and Fishing Licenses	Hunting and fishing database	Direct
Impound Vehicle	UCJIS	Web service
Lobbyist	Lobbyist database	Direct
Motor Vehicle Records	Driver database	Direct
Notary	Notary database	Daily batch
One Stop Business Registration	Tax "Bad Players" data	Weekly batch
Personalized Plate Search	Bad Plate data	Monthly batch
Professional License Renewal and Lists	Subset of LES database	Daily batch and Direct via DBVisualizer
Provo Business License Renewal	Provo business data	Annual batch
Real Estate Renewal	REL database	Daily batch
Renewal Express	Subset of MVA database	Monthly batch
Sandy City Employment	Sandy employment data	Direct
Storm Water Permits	Storm water database	Direct
Tax Express	Taxpayer account data	Annual batch
TC61	Sales tax account data	Monthly batch
Title Lien Registration	UCJIS	Web service
Tooele County Property Tax	Tooele property tax data	Annual batch

<sup>12</sup> Utah Interactive, Inc., *Utah.gov Access to Agency Databases*, February 7, 2007.

Uniform Commercial Code Filing and Search	UCC database	Direct
Utah County Property Tax	Utah property tax data	Annual batch
Utah Highway Safety Inspection	UCJIS	Web service
Validate	UCJIS	Web service

In many cases, UI does not have access to entire databases, just limited subsets of the data. UI is currently providing existing services with 18 unique State data stores and four local or county government data bases. The existing Utah.gov service offering from the contractor is using 2.2% of the available systems to provide a useful core of government services.

### **Search Capabilities**

Information and government services are of value only if users can quickly find what they are seeking. Context matters, a user-looking for licensing information in Commerce has very different needs from users seeking licensing information from Wildlife Resources. Current search capabilities are just beginning to address semantic issues and more effective meta-tagging of services to improve access.

Current search capabilities are dependent on Web site contextual descriptions and very limited attempts at effective meta-tagging. Database resources, for the most part, are not searchable by external search engines such as Google or Yahoo.

Utah.gov provides two basic search functionalities on the site. The first is a Google site search that crawls the entire Utah.gov domain and selected other State Web sites with other domain designations that are sponsored by Utah government agencies. This search is currently being modified to rely on site maps, and selected database searching that will continue to improve the user search experience. The goal is to expose as much State information as practical for all types of users.

The Utah.gov site also has implemented an Ajax site search that allows users to enter keywords and get access to information on the Utah.gov sites as well as hundreds of additional Utah specific State, local, and federal government information and services.

### **Summary and Conclusions**

(Insert Text once all other document sections are completed)