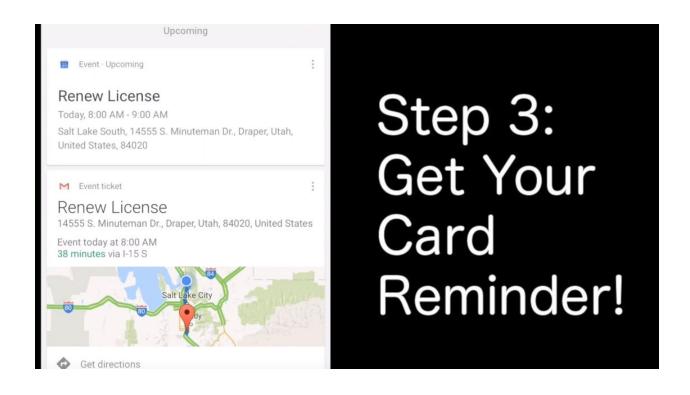# Utah.Gov
Motor Vehicle Appointment Reminders

Category: Emerging and Innovative Technologies
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State of Utah
Project Initiation and Completion Dates:
March 2016 – May 2016

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Executive Summary

Leading tech companies are pioneering new ways to interact with people from Bots, Digital Assistants, and the Semantic Web. Utah's digital strategy has always focused on the user experience and delivering content to the viewer's screen of choice. To meet this strategy, Utah is leveraging these new technologies and expanding services in three exciting areas:

- automation,
- digital assistants,
- and the semantic web

This award submission is focused specifically on digital assistants. More details about the Utah digital strategy and the use of digital assistants can be seen at: http://www.utah.gov/digitalstate

Reminder Bots

When a citizen schedules an appointment with the Driver License Division (DLD) or subscribes to receive notifications about specific public meetings, the appointment notification emails they receive are coded for Google's bot called Google Now.

Appointment Reminders for Driver License Division using Google Now Cards

In order to enable a more seamless interaction with online services, Utah enabled Google Now Cards to be included in appointment notification emails from the DLD. Utah implemented this enhancement starting in May 2016.

Utah's Public Notices will include Google Now Cards Q2 of 2017

Utah's award winning Public Meeting Website provides the residents of Utah with a single, online location where information regarding all public meetings, hearings, and bond notices can be easily searched and followed and will soon include Google Now integration.
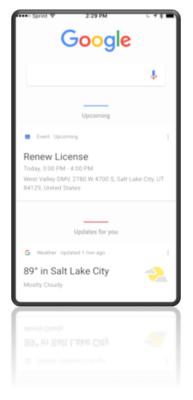
Project Narrative

Reminder Bots

When a citizen schedules an appointment with the Driver License Division (DLD) or subscribes to receive notifications about specific public meetings, the appointment notification emails they receive are coded to be used by Google's bot called Google Now. The structured markup, added to emails, allows Google Now to automatically add

the appointments and public meetings automatically to the citizen's Google calendars and reminders.

By implementing Google Now and the associated Google Now Cards, Utah has pushed this valuable information more directly into the hands of users. The Google Now service enables the coded messages to effortlessly put the information where users need it and where they want it, on their mobile devices. The Google Now Cards are available on most Android phones and any iPhones using the Google app and Gmail. The benefit for users is that they don't need to do anything, the information they need is automatically displayed without any action on their part. Google Cards will remind them when it is and tell them how long it's going to take to get there - even when they need to leave based on current traffic conditions.

Appointment Reminders for Driver License Division using Google Now Cards
In order to enable a more seamless interaction with online services, Utah enabled Google Now Cards to be included in appointment notification emails from the DLD. Utah implemented this enhancement starting in May 2016.

Residents of Utah can use the online Driver License Scheduler application to schedule appointments to apply for a driver license, a learner's permit, and many other services. This effective online tool annually schedules over 60,000 appointments to streamline the operations of the DLD. Appointment emails are programmed to automatically update the user's Google calendar and to activate Google Now reminder cards. This enhanced feature allows the Google application on Android and iPhones to alert the resident before the appointment as well as providing interactive maps and directions.

In 2016, over 30,000 appointment reminders were sent to gmail accounts with the Google Now Cards markup embedded in the email. Marking up the email content to be indexed and understood by intelligent digital assistants improves the number of appointments that happen on schedule, improving the lives of the residents of Utah and making the DLD more efficient.

Utah's Public Notices will include Google Now Cards Q2 of 2017
Utah's award winning Public Meeting Website provides the residents of Utah with a single, online location where information regarding all public meetings, hearings, and bond notices can be easily searched and followed. The public notice website is used by all government bodies (more than 1000 agencies) in the state including county, city, and school districts to post all public meetings and notices. The system sends out over 200,000 meeting and posting reminders annually to residents who have requested the information.

The Public Notice site is receiving a makeover that includes adding Google Now Cards programing to the 200,000 annual emails. These changes are currently being tested and will launch before the end of May, 2017.

Visionary
Digital assistants like Google Now are enabling entirely new ways for access to government services. Interactions with government can be transformed on many devices including smartphones and the Google Home appliance.
https://www.youtube.com/watch?v=40lwzBzXV1w

Transformational
Google's Digital Assistants have the power to also transform interactions with government. Digital assistances are quietly now reminding citizens of government deadlines and will soon be able to to complete the transactions with government agencies at the point of reminder that they remind us of the deadlines.

Concept

Problem
Citizens make appointments to interact with State Government employees but forget to show up to the appointments.

Solution
Utah enabled Google Now Cards to be included in appointment notification emails from the DLD starting in May 2016.

https://www.youtube.com/watch?v=8D-vQRjWK-w

Residents of Utah use the online Driver License Scheduler application to schedule appointments to apply for a driver license, a

learner permit, or many other services. Over 60,000 appointments are scheduled annually with the DLD using this effective online tool.

These appointment emails are now programmed to automatically update the user's Google calendar and to activate Google Now reminder cards. The google applications on Android and iPhones are able to alert the resident before the appointment as well as providing interactive maps and directions.

Marking up the email content to be indexed and understood by intelligent digital assistants improves the number of appointments that happen on schedule. In 2016, over 30,000 appointment reminders were sent to gmail accounts with the Google Now Cards markup embedded in the emails.

"*We added coding to the messages that tells the Google Now application when and where the appointment will be,*" said Mike Hussey, Utah State Chief Information Officer. "*The process uses the tools many Utahns are already using.*"

Project Management
The addition of Google Cards to the DLD scheduler application was part of a six-week project to update the application. Staff spent 100 hours on this initiative brainstorming the solution, developing the code, testing, and launching solution.

Costs for DLD
Planned launch date: April 20, 2016   Actual launch date: May 1, 2016
Planned development time: 6 weeks   Actual development time: 6 weeks

The addition of Google Cards to the Public Meeting Notice Website is part of a larger six-week project to overhaul the email system away from a listserv based application. Developers have spent 50 hours so far designing, developing the code, and testing.

Costs for Public Meeting Notice Website
Planned launch date: April 15, 2017   Actual launch date: Pending
Planned development time: 6 weeks   Actual development time: Pending

Evolution
The Driver License Scheduler Application and the Public Meeting Notice website are both written with Java and utilizes JSON-LD within the email body. JSON-LD or JavaScript Object Notation for Linked Data, links and organizes data using a JSON based data format that allows for context. This standard creates a network of

machine-readable data that can be connected across Websites and applications. Gmail supports JSON-LD using schema.org.

Accessibility and Security

Usability- The Google Now Cards are automatically embedded in every outgoing email for DLD appointments and soon to be public meetings. Users do not have to change any behavior to take advantage of this seamless integration.

Accessibility- All Utah.Gov services are fully accessible regardless of device. We conduct in-house and independent audit tools to make sure all applications are accessible to users. The google now cards can be accessed on multiple devices, including the Google Home voice activated device which extends the service to individuals with vision or muscular impairment.

Security and Privacy–The state of Utah and Utah.gov take security very seriously especially protecting users personal identity and their financial information. These Google Now Cards do not contain any privacy information besides the user's first and last name.

Marketing

These applications have taking advantage of the large user base that has already been developed through outreach by the agencies.

Significance

Beneficiaries

There are three million residents of Utah and many of them interact with state, county, and local governments multiple times in a year. The Driver License Scheduler Application services 60,000 people each year and the Public Meeting Notice sends out over 200,000 meeting reminders to people each year. Additionally, the DLD has 26 offices around the state. Those offices are run more efficiently as more people show up to the scheduled appointments.

In 2010, Utah's DLD learned the real value in scheduling appointments in advance. At that time, they were required to start checking physical IDs in compliance with the Real ID act. Compounding the problem was a new computer system the DLD implemented to accommodate the documents that need to be scanned. A news report from January 20, 2010 stated: "*Right now at the West Valley offices, it's an hour-and-a-half to an hour and 45 minutes,*" Caras said about the average wait. "*Again, it varies by office. Last week, waits were as long as five hours,*" Caras said. The offices are processing 450 to 500 people per day. "*Our actual productivity has reduced because it takes us longer,*" Caras said

Utah's Driver License Scheduler application was launched in March of 2010 to help alleviate the long lines in the office and has been a valuable tool for the Division since its launch.

Relevance

Utah's appointment emails are designed to provide Utah drivers the very best information and technology available to help them be licensed with the state. Increasingly individuals are looking to new technologies and other mobile devices to interact with government and learn about vital information and records such as state issued licenses.

Impact

Savings

Before the implementation of the email markup language, 40% of citizens did not show up to their scheduled appointments. Since the update, successful attendance at appointments has grown by an additional 2,900 appointments, realizing significant savings to the state of Utah and increased satisfaction to the users making the appointments. Recently, the University of Utah completed a study related to online services. The first study looked at cost savings when filings are converted from paper based to online. They found that an average offline interaction cost the state $17 while the online service cost the state just under four dollars. This study concluded that the state saves $13 for every online transaction.

Measurement

The Driver License Scheduler Application services the 1.9 million licensed drivers in Utah. 60,000 people use the system each year. The Public Meeting Notice sends out over 200,000 meeting reminders to people each year.

In 2016, beginning May 1, about 50% of 60,000 (30,000 gmail accounts) driver license appointments were sent to gmail accounts. In 2017, it is estimated that Google Now Cards will be sent via email to 35,000 Utah drivers along with 200,000 emails for public meeting notices.

The Google Now Cards are designed specifically for the Google Now assistant but because the information is written in an open standard, other mail client applications could choose to utilize this information. The benefit to Utah residents would expand if other software providers adopted this same standard.