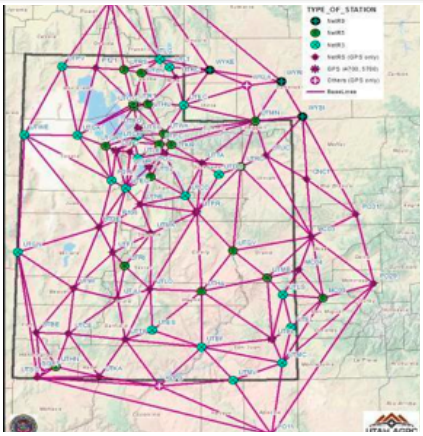
STATE OF UTAH GLOBAL POSITIONING REFERENCE NETWORK

REQUEST FOR ONE-TIME MAINTENANCE FUNDING

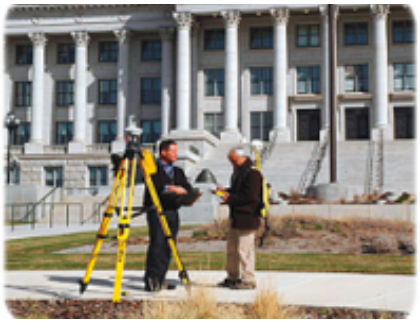


$295,000

Estimated one-time expense for Software, Modules, Receivers, and Server Upgrade

Upgrading the network will increase capacity, allow for hundreds of additional subscribers, and will decrease ongoing operating expenses *($160,000)*.

Replacing older hardware with Global Navigation Satellite System (GNSS) compatible devices will allow the use of all current and future satellites *($135,000)*.



For more information:

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UTAH AGRC
Automated Geographic Reference Center

In 2005, the Utah Legislature, recognizing the need to support **highly accurate GPS applications for surveying, engineering, construction**, and GIS data collection, signed into law UCA 63F-1-509 to fund the initial buildout of a ***real time GPS base station network***. UCA 63F-1-509:

- created the Statewide Global Positioning Reference Network to improve the quality of geographic information system data and the productivity, efficiency, and cost-effectiveness of government services;
- required the Automated Geographic Reference Center (AGRC), within DTS, to administer the network; and,
- provided the first (FY05, $375,000) of two initial years of funding for hardware, software, construction materials, and labor to implement, expand, and maintain the network.

Successful Implementation

TURN GPS is now a statewide network of 70 survey grade GPS receivers permanently located across Utah. **The network is used by 350 paying and partnering subscribers.** The network consists of a *partnership of cities, counties and state agencies* to leverage equipment and facilities, plus a central 'solution server' maintained by AGRC. Analysis and communication of the data sent from over 70 base stations across Utah to the central server allows for filtering of atmospheric distortion to the GPS signals, as they are relayed from orbiting satellites to the end user. *All of this happens in real time and the result is a much higher level of precision and consistency for GPS receivers used in the field for transportation, surveying/engineering, agriculture.*

Operational Costs & Maintenance

In 2005, the House Political Subdivisions Committee recommended that subscription fees be charged to offset operational costs, but acknowledged that usage rates and technology changes would require that the funding model receive future consideration.

- 2007-2009 fees were $300 per year for each subscription.
- 2010-current fees are $400 per year for each subscription.

Low subscription fees result in more usage and more accurate locations for surveying monuments, public lands, and private property.

Current Maintenance Issues

- The network currently runs on software developed in 2002 and is limited to a 32 bit server platform.
- The 32 bit system has reached its processing threshold for network expansion and concurrent user growth.
- Approximately 35 of the 70 GPS network receivers are older models, unable to take advantage of GPS signals from new satellite deployments made by the international community.