

USNG Mashup Scope of Work

Business Need

The integration of US National Grid (USNG) coordinates in online web mapping systems has only been partially implemented on a variety of web mapping pages. When not in possession of USNG standardized printed map products, one of the most difficult things to do is to take a USNG coordinate and quickly produce a basic, readable map, or vice versa: take a basic map or address and obtain a USNG coordinate.

To relieve this difficulty, Larry Moore developed a web map based on the Google Maps API that incorporated USNG coordinates: <http://dhost.info/usngweb/> . This web map is in need of an upgrade to the latest version of the Google Maps API, which will also allow for some basic enhancements to add to its usability.

Stakeholders

Potential users of an upgraded USNG Mashup include search and rescue teams, emergency responders, police and fire departments who may need to find an individual or location based on a USNG coordinate provided. Other users could be 911 operators looking to describe an address or location to responders who are unfamiliar with the area.

As an organization whose goals are to help government, non-profit, educational, and corporate entities share geospatial information for the public good, SharedGeo is a natural stakeholder and host for the USNG Mashup.

Deliverables

- An update to the Larry Moore Google USNG mashup using the most recent stable (base 3) minor version of Google Maps API. Further detailed deliverables are in the project plan/cost proposal below
- Coordination with Jim Klassen to integrate previous SharedGeo code efforts, including use of a javascript library that implements USNG coordinate translation to and from WGS84 for geocoding/search and coordinate display. The library is posted on github (https://github.com/bitner/usng_tools)

Project Plan / Cost Proposal

The following table details the individual tasks involved in producing the deliverables, along with minimum and maximum estimates for the hours involved.

Major Task	Sub Tasks	Minimum Hours	Maximum Hours
Study SharedGeo code, comparison		8	12

of the code Larry Moore used			
Examine Larry Moore scripts for upgrade needs			
	gridlines.js (calculate and display U.S. National Grid zones and gridlines)	8	14
	markers.js (setting markers and showing info window displays)	2	4
	usng.js (calculate National Grid Coordinates. Most likely to be replaced by SharedGeo code)	6	10
	search.js (for search and directions input forms)	3	6
	startup.js (initializes the application, manages the size of the map window etc)	6	10
	labeledmarker.js (markers with text labels. Not sure where used)	2	4
	gars.js (converts lat/lng pairs to Global Area Reference System)	2	4
	garslines.js (calculate and display Global Area Reference System zones and lines. Not sure where used.)	3	6
	nad27.js (not sure where used)	1	2
User Interface Design & Upgrade			
	Map Panel	4	6
	Address/Place Search with AutoSuggest	2	4
	USNG Search	6	8
	Directions (Launch to Google Maps)	2	4
	Dynamic Coordinate Display	6	10
	USNG Zones, 100K, and 1K	8	12

	grid overlays		
Marker Drop		4	6
Info Window Design			
	Standard/USNG Tab	4	8
	Other Tab	8	12
	Coded URL to specific location	2	4
Architecture & Documentation			
	Overview & Process	4	6
	Script usage, comments, and initialization parameters	4	6
	HTML, CSS, & UI design	1	2

Cost Proposal Totals

Minimum Hours Required: 96

Maximum Hours For Contract: 160