To: Interested Parties

From: Richard Zorza

Re: Strategies for Expanding Legal Services Mapping

Date: March 16, 2005

I. Introduction

This short document informally describes some options for supporting continued expansion of legal services mapping and condenses them into initial steps to move forward.[1] As the LSC Office of the Inspector General evaluation of mapping project draws to a close, there is a need for some form of continuing support for the legal services mapping concept and these are suggestions that would meet that need.

II. Assumptions

The extensive observation of mapping and input from the field evaluation participants leads to the following assumptions, which guide this document:

- Mapping is highly valuable and there is strong desire at the field level for mapping capacity.[2]
- The field capacity to produce advanced maps remains relatively low.
- Legal Services Mapping will move forward best at the program level if it is viewed as voluntary.
- National maps provide highly effective communications tools for LSC management.
- Understanding economic realities, only very low-cost options are offered.

III. Requirements

In order for legal services maps to be produced nationally, the following things need to be done.

- Cases, offices and their addresses need to be turned into points on maps (geo-coded).

[1] This document represents the opinion of Richard Zorza and is offered to facilitate discussion. It builds on ideas initially distributed by Gabrielle Hammond by e-mail.

[2] This case will be laid out in the upcoming OIG Mapping Report through the grantee evaluations of the project, and will not be duplicated here.

- Other data, such as census data including poverty levels, language, need to be processed, and placed in the right format and structure for integration into potential maps.

- State and service area maps need to be designed and produced.

- National maps need to be designed and produced.

IV. Two Core Approaches

There are many potential approaches, but in the final analysis, there are two obvious ways of moving forward on each of these tasks. Each approach has advantages, and disadvantages and a combination of approaches may ultimately end up being most effective. These approaches can also be phased.[3]

Approach One: LSC CENTRAL MAPPING WEB SERVER - A centralized legal web mapping system, requiring only very low levels of technological capacity by grantees.

In this approach, a central Internet server provides the mapping service components. For example, addresses can be uploaded and geocoded locations generated, service areas can be identified and census data returned. Alternatively, service areas and other parameters can be entered and finished maps could be returned in digital format.

The biggest advantages of such an approach are the ease of use, universal accessibility, ensured quality and low cost to the grantees, and therefore the rapid adoption. However, such systems are expensive to initially establish, and are not flexible in meeting every grantee's special mapping needs. Partnering with other organizations is possible.

Approach Two: GRANTEES PERFORM ALL MAPPING ON THEIR OWN - Grantees produce maps locally, with limited help from centralized support.

Under this approach, all mapping work is done locally by the grantees themselves, with LSC providing limited technical support. For example, each program would perform the geo-coding process locally, having obtained the software and address files. They can download, massage and reformat census data, and design and build the maps using locally obtained software. The role of LSC would be limited to provide training and technical hotline support.

Such a system involves low expense by LSC, and will result in slower and less uniform adoption of mapping, as well as not necessarily produce all data in

[3] For example, the poverty distribution maps representing indicators of legal need could be produced initially and legal services provided data could be added later.

required formats.[4] The entire expense and onus of effort is placed on the grantees, which are far from being experts in mapping. No economies of scale are realized by the grantees' individual mapping efforts, and without a mandate, the chance of wide adoption and access to the benefits of mapping are very low.

V. A Combined Approach

I suggest we should consider an intermediate approach that is a hybrid of the two extremes discussed above.

GRANTEES:

- Download Census Data Pre-packaged for their service area from a central website
- Use a central web service for Geocoding (turning case addresses into mappable points)
- Get training and technical help from a centralized support service
- Generate the core maps and any others they require to support planning and operations with ARCview GIS software acquired from the ESRI grant

LSC:

- Establishes and maintains a download site (potentially hosted at an outside organization) for pre-processed Census data cut to the exact service area boundaries of each grantee, along with the map boundaries of each service area
- Establishes and maintains a web facility for geocoding of grantee case addresses
- Funds training and technical support of grantees.
- Makes maps internally for its own analytical, communications and promotional purposes

Under thus approach the following components would require LSC's support and involvement:

CENSUS DATA – Simple Grantee Web-based Access to Census Data.

Census demographics and social indicators from other social services agencies and providers are the main data that Grantees can use to show the demand for legal services on maps. These data types are unfortunately not simple to obtain, ingest and manipulate. It is imperative, for the sake of adoption, that some steps are taken to make such important data more easily accessible to grantees.

[4] It would, for example, be very hard for grantees to generate 125% poverty numbers by Census block group on their own.

The data can be made available to grantees on a central web server, thus avoiding reproduction and distribution costs. It may be possible to leverage existing investments in such services by government and non-profit agencies such as HUD and Fannie Mae. The website would allow grantees to identify themselves and digitally receive packaged sets of Census demographic (e.g., 125% poverty densities per Census block group, tract, and county) and social indicator data for their specific service area, along with the recognized map outline of their service boundary. The data would be prepared and ready for incorporation and use with ARCview GIS version 9.

GEOCODING - Turning Case Addresses into Mappable Points.

The argument for centralized automation of this process is compelling. It is believed that a centralized web-service could be established where the grantees could upload the case addresses as extracted from their case management systems, and have them converted to mappable points. LSC would negotiate a contract agreement with a vendor of on-line geocoding services such as ESRI, MapInfo, TeleAtlas or Navtech. This vendor would establish privacy-protected on-line accounts for grantees who could upload their case data, and have confidentially returned to them a digital file with case latitude, longitude, standardized address, Zip Code, Zip+4, Census Block, Block Group, Tract and County, and a geocoding accuracy code, all ready for mapping.

TRAINING AND SUPPORT – Grantee Training in Mapping and Technical Support in Operating the Mapping Software.

The following activities would form the core of the training and technical support for mapping by LSC:

- Provide ½-time equivalent for technical support of grantees in getting started with mapping.
- Produce a training manual on how to make a core set of maps would be produced. It would include specific instructions on how to extract case address data from a CMS data, geocode it, and ingest it into the ARCview 9 mapping software system. It would also describe how to download the Census data from the hosting website and to prepare the mapping database.
- Update the NTAP training for ARCview 9.0, and conduct periodic on-line training sessions. New training sessions on geocoding or use of Census data may be required.
- Maintain mapping information and resources on LSTECH.

LSC - Design and Preparation of National Maps.

National maps require data, design and production. Census data could easily be integrated at LSC into national maps, and could be performed as part of the current data collection process, after some initial training and consultant support. Showing service delivery nationally at the zip level could be done with a small change in CSR reporting. Going to the greater level of detail at a case level would require either the reporting of addresses to LSC or full participation in geocoding by all grantees.

VI. Summary

Thus the geocoding could be handled nationally, the census data and service area maps could be created nationally, and the design and mapping could be performed at the local level, with LSC generating their own national maps and providing support both for a simple map producing server, and for local level use of software already available at very low cost.