



16 August, 2005

Department of State User Imaging Requests for Diplomacy and Foreign Policy

Introduction

Remote sensing, or satellite imagery, can be powerful for enhancing general situational awareness and a useful tool for diplomacy and foreign policy. Images show the organization of urban areas, the extent of undeveloped land, and the diversity of agricultural development. Comparison of images of the same scene can be valuable for perceiving seasonal change, tracking weather, and scrutinizing environmental changes. Satellite images can unveil the scope and complexity of disasters and be used to prepare for future protection. For diplomacy and policy, imagery can demonstrate key issues, and scientific analysis can provide concrete metrics on specific areas of concern.

The Office of eDiplomacy (IRM/BPC/eDIP) in collaboration with Intelligence and Research (INR) has identified the potential uses of *unclassified* commercial and civil remote sensing imagery within Department of State (DoS) Bureaus and Posts and for USAID. For the discussion of user needs herein, this imagery will be referred to as “unclassified imagery” and includes data from commercial companies as well as NASA, NOAA and other sources. Accessibility to unclassified commercial imaging has greatly improved with the advent of new government licensing agreements through the National Geospatial-Intelligence Agency (NGA, formerly NIMA), through the US Geological Survey (USGS), and cooperation with commercial vendors. The purpose of an assessment of user needs is to understand the types of data and products of use to DoS, beyond materials needed for security and counter-terrorism, although many products can serve a variety of needs, that is, a product developed for security (a hybrid image/map) may well be useful for other diplomatic purposes.

Method

eDiplomacy regularly conducts interviews and surveys to characterize the work environment of DoS employees and identify technological solutions to improve productivity and capacity within the Department. For user needs assessment numerous individuals within the DoS were interviewed regarding imagery needs. From these interviews it appears that, in many cases, support to Bureaus and posts could be very modest. That is, the types of imagery products can be reasonably simple. Currently most DoS users do not need delivery of individual multi-spectral scientific data products in common use in academia. They often do not need extensive explanation or additional

research to be accomplished. For example, most of the requests have been for images (or “imagery-derived products”) that are essentially natural color jpg or gif products with a minimal of annotation. It is clear that for some applications and as the experience of the users and decision makers grows, more sophisticated types of products and access to image data with geo-referencing (i.e., GeoTIFF or other formats) may be desirable. Such geo-referencing is and will continue to be useful for incorporation in Geographic Information Systems applied to a variety of purposes. For the near term, requestors have asked for simple (i.e. non-geo-referenced) digital products that can be integrated into reports, webpages and other documents.

The attached tables reflect documentation of a subset of the imaging needs articulated by users to eDiplomacy (C. Christian). A mechanism to support imagery requests for diplomatic and foreign policy activities within DoS is required so as to provide assistance for these fundamental DoS functions without disrupting or conflicting with crises, security, and intelligence requests, which often have related requirements but compete for and supersede allocation of resources. Beyond these quiescent activities, support for more sophisticated data products is needed for posts and offices with technical expertise. One example is INR’s Humanitarian Information Unit, which has the capacity to use unclassified imagery and related GIS data not only for emergency contingency planning and response purposes, but also to support ongoing aid and reconstruction efforts.

Recommendations

Based on the needs of users interested in using imagery products, it is important for DoS to establish a process for servicing regular requests for imagery data. This support should be consistent and not superseded by products needed for crises, disasters, counter-terrorism or security. A creative solution would probably involve using a combination of in-house analysts, agreements with NGA and other USG technical agencies, and cooperation with the academic community. Typical unclassified data requests will be for large footprint, lower resolution data such as LANDSAT, ASTER and MODIS. Other commercial and higher resolution imagery such as shuttle photography and SPOT, IKONOS, Quickbird and OrbView are also useful for some applications. In summary:

- Develop a streamlined and clear process for users to make imagery requests
- Provide imagery analyst resources to service requests either through a single (e.g., INR) or several (e.g., INR, OES, HIU) centralized support offices
- Develop support expertise through a mixture of in-house, external contractor and academic community resources
- Insure that support for diplomacy and foreign policy does not compete against security, crisis and counter-terrorism efforts for resources