Supporting Statement A for

NLM's PEOPLE LOCATOR® System
Lister Hill National Center for Biomedical Communications

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Mini Supporting Statement
NLM PEOPLE LOCATOR® System

Section A

A.1 Circumstances Making the Collection of Information Necessary

This is a request that the Office of Management and Budget (OMB) approve, under the Paperwork Reduction Act, **a revision of clearance OMB 0925-0612. The current clearance expires on June 30, 2013.**

This collection of data is intended to assist in the reunification of family members and friends who are separated during a disaster. Experience in operational drills and during real-world disasters such as the January 2010 earthquakes in Haiti demonstrates that family members and loved ones are often separated during disasters and have significant difficulty determining each other's safety, condition, and location. Reunification can not only improve their emotional well-being during the recovery period, but also improve the chances that injured victims will be cared for once they are released from urgent medical care. Family and friends are also a valuable source of medical information that may be important to the care of injured victims (e.g., by providing family or personal medical history, information about allergies). The National Library of Medicine (NLM) aims to assist Federal, State and Local agencies in disaster relief efforts and to serve its mission of supporting national efforts to the response to disasters via the PEOPLE LOCATOR® system and related mobile app (ReUnite™) developed as part of the intramural Lost Person Finder (LPF) R&D project. The information collection would be voluntary. It would be activated only during times of declared emergencies, training and demonstration support activities, and would operate in declared emergencies until relief efforts have ceased in response to a particular disaster.

This data collection is authorized pursuant to sections 301, 307, 465 and 478A of the Public Health Service Act [42 USC 241, 242l, 286 and 286d]. NLM has in its mission the development and coordination of communication technology to improve the delivery of health services. NLM is a member of the Bethesda Hospitals' Emergency Preparedness Partnership (BHEPP), which was established in 2004 to improve community disaster preparedness and response in Bethesda, MD. As part of the National Capital Region, Bethesda would likely be called upon to absorb mass casualties in a major regional disaster. BHEPP hospitals include the Walter Reed National Military Medical Center (WRNMMC), the National Institutes of Health Clinical Center (NIH CC), and Suburban Hospital/Johns Hopkins Medicine. Congress provided funding for BHEPP in FY 2005 and provided additional funding for supporting research and development in FY 2008. NLM, with its expertise in communications, information management, and medical informatics joined BHEPP to coordinate the R&D program, one element of which is development of a lost person finder system to assist in family reunification after a disaster. NLM hastened development of the system so it could be deployed as part of relief efforts following the January 2010 earthquakes in Haiti.

A.2 Purpose and Use of the Information Collection

The information collection would support efforts to reunite family and friends who are separated during a disaster. Information about missing ("lost") people would be collected from family members or loved ones who are searching for them. Information about recovered ("found") people could be provided by medical personnel,   volunteers and other relief workers assisting in the disaster recovery effort. Information collected about missing and recovered persons would vary including any one of the following and possibly all: a photograph, name (if available for a found person), age group (child, adult) and/or range, gender, status (alive and well, injured, deceased, unknown), and location. Additional free-form text notes may also be submitted. Collected information would be made available to the public via a specialized interface to allow users to search for and locate family members and other loved ones with either text or visual search. Information would also be collected from and shared with other lost person finder systems endorsed or used by other Federal agencies, such as the U.S. Department of State, which made use of a system developed by Google during the relief efforts in Haiti in early 2010. NLM has also used the information to evaluate the functioning and utility of the lost person finder system and guide future enhancements to the system as various disasters have occurred (Japan Tsunami, 2011).

NLM's LPF project has two main components: PEOPLE LOCATOR® which is a web-based system and mobile app ReUnite™ that is available for iOS devices (iPhones, iPod, Ipad) and Android smartphones. An early version of the system was made operational during the recovery effort in Haiti. Information was collected on some 55,000 individuals, mostly missing persons whose family members were trying to locate them. Much of this information was imported from Google and other lost person finder systems that were established for use in Haiti, and data submitted directly to NLM's systems was shared with Google.

Nevertheless, based on its experience developing and deploying the LPF, NLM improved the information collection in several ways. In addition to free-text notes, the capability for users to submit voice notes of up to 30 seconds in length is available but not currently active. The speaker of the voice note can voluntarily self-identify themselves (i.e., social worker, reporter, and victim). Other enhancements included: (i) expanding the set of Web browsers that work with the PEOPLE LOCATOR® system, thereby broadening the reach and usefulness of the system; (ii) adding additional search options as well as optimizing search queries to produce more relevant results; (iii) increasing multilingual support by adding languages; (iv) automating the import and export of records from/to other relevant person finding systems (such as Google's); (v) improving the help pages; (vi) adding a "details page" to support a broader set of information displayed about each lost or found person; and (vii) improving the speed at which the initial results pages can be generated. While the initial system took over 3 weeks to develop and deploy in Haiti, an enhanced version of the system was created, customized, and tested in just two days in response to the Chilean earthquake. Since then this response time has been vastly improved as a result of continuing R&D efforts so that today a new event can be created in less than 5 minutes

Other enhancements to the system since 2010 have aimed to improve search capabilities and structured data input through the iOS app ReUnite™ for the widely available iPhone, iPad and iPod devices as well as a version that operates on Android smart phones and unstructured data through mobile phone email. The iPhone App was revised to: (i) support iPhone/iPod/iPad devices; (ii) enhance the user-interface; (iii) offer higher image quality; (iv) enable region-of-interest selection on the image; (v) provide XML formatted communication between iPhone client and server; and (vi) improve device data handling. Recognizing that the system might be used simultaneously for multiple disasters (e.g., earthquakes in Chile and Haiti), the iPhone App was also redesigned to support Web services that enable refreshing image tags and database content for future disaster events. To further simplify data entry for users, the app was modified to use mapping technology for recording the location of the person entering the data, saving addresses for repeated use (e.g., for the location of a relief/aid station), addition of up to four image tags. Ongoing enhancements include on-device data encryption and face localization to aid in visual searching.

A.3 Use of Information Technology and Burden Reduction

The information collection uses advanced information technology for submitting information to the system and for searching it. Photographs and textual information describing "found" victims of the disaster can be submitted via email from computers or camera-enabled cell phones. NLM has also developed applications for widely used smart communication devices including the iPhone/iPad/iPod as well as Android-based smartphones to simplify the submission of information. A Web-based search mechanism allows on-line retrieval of possible matches using descriptive information, such as age group, gender, and location, in addition to name. As indicated below, enhancements will continue to be made to the data submission and search capabilities in order to improve the efficiency and the effectiveness of the system.

A.4 Efforts to Identify Duplication and Use of Similar Information

NLM has sole responsibility for developing the family reunification applications under its Lost Person Finder R&D Project for use within member organizations of the BHEPP. It collaborates with other organizations involved in disaster response to identify and ensure coordination with related efforts. In the case of the Haiti earthquakes, for example, Google.org launched its Person Finder system that accepts information from a variety of sources. The NLM PL systems accept data from and shared data with the Google.org system in order to ensure that users of either system had access to as much relevant information as possible. It offers several unique features, such as smartphone and tablet computer applications for data submission that are not currently available in Google's system. NLM's system also allows users to search based on criteria other than name, such as age (adult or child), and gender and uniquely, allows matching of uploaded pictures with those in the database. In particular, the system is developing technology to match facial features with an aim to improve search quality-especially when it is combined with other criteria such as name, age, and gender. As future work, the NLM system plans to include location-based searching to assist using criteria such as, "last

known location", or "within 5 miles." The NLM system also includes a "notification wall" for a scrolling display of images of victims added in the last 1 or 24 hours. In addition, NLM's system federates data collected by other lost person finder systems to provide one-stop searching across them to allow more comprehensive searching and matching capabilities. Information sent to NLM can be shared with other lost person finder systems and searches performed with the NLM search engine will retrieve relevant information from other known lost person finders assuming they provide us the data access. Google's Person Finder system does not operate under the control of the US Government, does not activate for smaller disasters (i.e. Joplin Tornado) typically and does not have an R&D mission focus. In this way, NLM's information collection will not be duplicative, but will complement and augment other services.

A.5 Impact on Small Businesses or Other Small Entities

N/A

A.6 Consequences of Collecting the Information Less Frequently

The use of the PEOPLE LOCATOR®/ReUnite™ system enables timely data entry by first responders, volunteers, and other relief workers at the scene of to assist in reunifying family members. Not collecting and not making available information for PEOPLE LOCATOR® would reduce the probability of timely reunification of families after a disaster or lengthen the time needed for family members to find each other. Failure to collect this information would also slow continuing efforts to improve the system for use in future disasters.

A.7 Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

This survey will be implemented in a manner that fully complies with 5 C.F.R. 1320.5. The agency requested and was granted an emergency clearance in January 2010 (OMB Control # 0925-0612) so that the information collection could be initiated during the recovery efforts in Haiti. As noted, the system had been in development for use within the BHEPP, but the unexpected earthquake in Haiti and other national and international disasters has prompted an effort to complete development of an operational system to cover these other use cases.

A.8 Comments in Response to the Federal Register Notice and Efforts to Consult Outside Agency

This proposed information collection was published in the Federal Register on April 15, 2013 (Vol. 78, No. 72, p. 22271) and allowed 60 days for public comment. A single comment submission was received (Attachment 5) which is currently under review for further consideration.

Development of NLM's PEOPLE LOCATOR®/ReUnite™ as part of its intramural Lost Person Finder R&D Project has been pursued in consultation with members of the BHEPP: the NIH Clinical Center, Walter Reed National Military Medical Center, and Suburban Hospital/Johns-Hopkins Medicine. In addition, since the earthquake in Haiti, NLM has been in contact with Apple, Google.org, the ICRC, the American Red Cross, the US Department of State, and the White House Office of Science and Technology Policy to inform them of its efforts. NLM staff have also presented the system through scientific publications, at conferences, and other events attended by private and government leadership.

A.9 Explanation of Any Payment of Gift to Respondents

No payment or gift will be provided to survey participants.

A.10 Assurance of Confidentiality Provided to Respondents

Information describing missing ("lost") and recovered ("found") victims of the disaster will be made available to the public, consistent with the intent of the system to assist family members, friends, loved ones in finding each other. Information collected about missing and recovered persons will include: a photograph, name (if available for a found person), age group (child, adult) and/or range, gender, status (alive and well, injured, deceased, unknown), and location. Additional free-form text notes and voice notes may also be submitted. Those submitting information to the system will be informed that all submitted information will be made publicly available and that submission of information is voluntary. Personally Identifiable Information (PII) will be collected. The data collection is covered by NIH Privacy Act Systems of Record 09-25-0200, "Clinical, Basic and Population-based Research Studies of the National Institutes of Health (NIH), HHS/NIH/OD." The SORN is currently being amended by the NIH Privacy Officer to add the National Library of Medicine. NLM has been granted an IRB exemption for this data collection.

A.11 Justification for Sensitive Questions

As noted above, collected information will consist of: a photograph, name (if available for a found person), age group (child, adult) and/or age range, gender, status (alive and well, injured, deceased, unknown), and location, as well as test notes and, when enabled voice notes. Experience in operational exercises and in the Haiti earthquake suggests that such information is essential to reunification efforts. As noted, all data submission is voluntary, and data submitters may withhold information they do not wish to provide.

A.12 Estimates of Hour Burden Including Annualized Hourly Costs

The estimated burden consists of the burden to emergency responders (volunteer care providers and relief workers) entering data into the system and of family members entering data to list a missing person and/or search for possible matches. We estimate that some 500 emergency responders might use the system during the course of the relief

effort and that each might submit information on 100 people. Submission of information, especially through the ReUnite™ application, is very fast and is estimated to average not more than 3 minutes per entry. The number of family members entering information about a missing person could be much higher. Based on use to-date of the Google Person Finder system (note: Google's Person Finder contained for one event over 600,000 records after the Japanese Tsunami and Earthquake, most of which related to missing people), we estimate that some 50,000 family members might use the system twice during a disaster. Data entry would average no more than 3 minutes. The total hour burden is calculated to be 7,500 hours. Using the average wage for all US workers of $21.74 per hour for family members and a rate of $34.97 per hour for emergency responders and other healthcare providers, the total dollar burden would be $196,125. All use of the system is voluntary.

A.12-1 Estimates of Annual Hours Burden				
Types of Respondents	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total annual burden hours
Emergency Care First-Responders, Physicians, Other Health Care Providers	500	100	3/60	2,500
Family members seeking a missing person	50,000	2	3/60	5,000
Total	50,500			7,500

	A12.2 Annualized Cost to Respondents				
Types of Respondents	Number of respondents	Number of responses per respondent	Average time per response (in hours)	Hourly Wage Rate	Respondent Cost
Emergency Care First-Responders, Other Health Care Providers	500	100	3/60	$34.97	$87,425
Family members seeking a	50,000	2	3/60	$21.74	$108,700

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missing person					
Total	50,500				$196,125

Cost has been estimated using the U.S. Department of Labor (DOL) Bureau of Labor Statistics occupational employment statistics http://www.bls.gov/oes/data.htm

A.13 Estimate of Other Total Annual Cost Burden to Respondents or Record Keepers

> N/A

A.14 Annualized Cost to the Federal Government

> N/A

A.15 Explanation for Program Changes or Adjustments

This is a request for an extension of NLM's current clearance authorization.

This collection is projected to have a reduction in burden hours of 4,500 annually.

A.16 Plans for Tabulation and Publication and Project Time Schedule

Data submitted to the lost person finder will be made publicly available/searchable as soon as possible after receipt. At the end of relief operations for a particular disaster, a summary paper may be prepared to describe the use of the system and its effectiveness in reuniting family members.

A.17 Reason(s) Display of OMB Expiration Date is Inappropriate

We are not requesting an exemption to the display of the OMB Expiration date.

A.18 Exceptions to Certification for Paperwork Reduction Act Submissions

This survey will comply with the requirements in 5 CFR 1320.9.