U.S. Department of State:
Life Safety Proposal for American Citizens Abroad
*(Updated from its first publication on January 7, 2016)*

The Gap: United States' citizens traveling abroad have no easy, reliable method of communicating their status to the US State Department during emergency operations. With the increase in American tourism and a rise in global terrorism, there must be a way for US Embassy personnel to rapidly verify the location and status of US citizens in the immediate aftermath of a terrorist attack. While social media have built Safety Checks, they are not reliable enough to be used with confidence for actual rescues because of issues like the authentication of the field users and their exact location, lack of secure, two way communications with US government assets, and the ability of terrorists to misuse social media sources. A solution is needed that provides US Embassy personnel with a realistic solution for Non-Combatant Evacuation Operations (NEO).

The Solution: Virtual Badge® would allow the State Department to immediately verify the status of pre-authenticated US citizens in an affected area, communicate with them *en masse* or individually if needed, and ensure responders can be deployed much more quickly and efficiently. Having immediate access to actionable information during a crisis such as the recent terrorist attacks would be an invaluable asset to the Department of State. Such a system also would greatly improve the capabilities of US Embassy personnel to assist US travelers abroad.
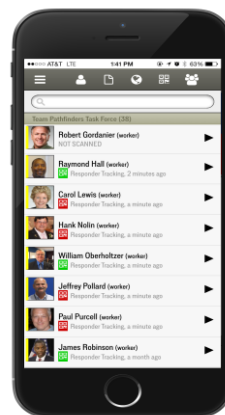
Virtual Badge® is a two-part software system that uses smartphones and/or tablets to collect and display information, and a web-based Control Center to view and analyze data. It is designed for identity management, activity reporting, optional GPS tracking, and inter-agency interoperability. Mobile users rapidly gather field observations which produce actionable data and improve situational awareness. Virtual Badge® is simple to use and becomes a force multiplier to improve the amount of credible information provided from the field. When incidents evolve rapidly, having such information can impact life and death decisions, especially considering incidents where US citizens are doing everything they can to stay mobile and get away from the threat. This system has been used by in some of the worst disasters for the last 8 years, including the Haitian Earthquake, BP Oil Spill, Japanese Tsunami, and many hurricanes.
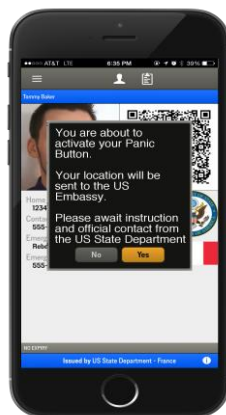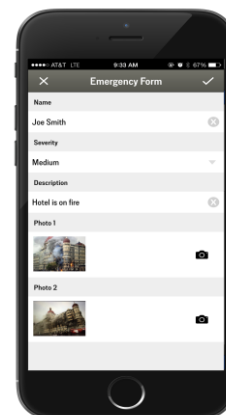

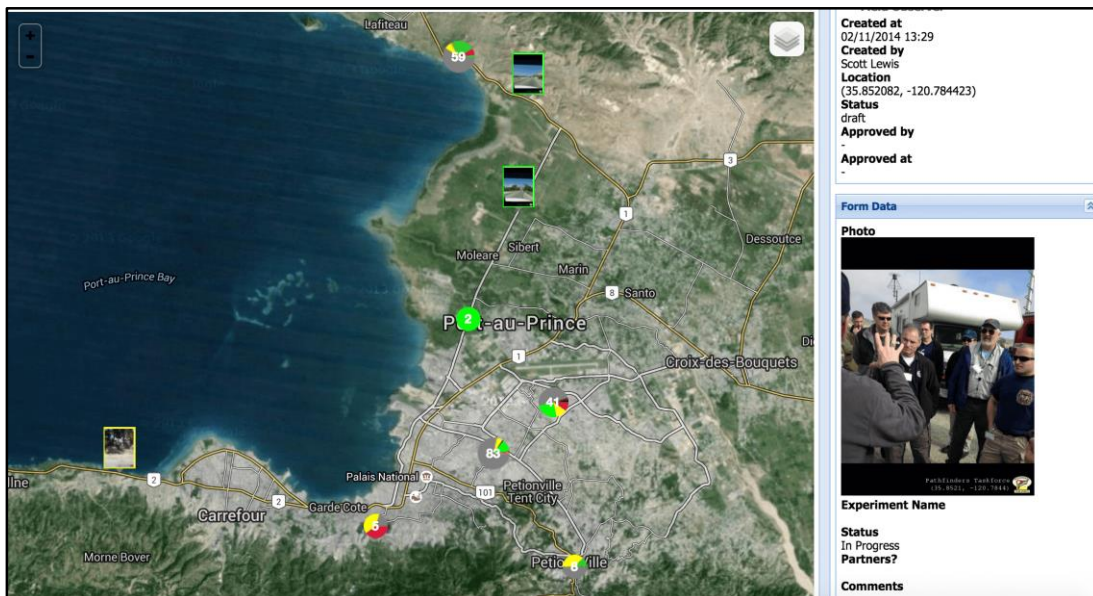| *The Virtual Badge®* | *Sample Panic Button* | *A VB Family list* | *A VB Sample Form* |

One Use-Case below (others will be apparent):

In a very short time, The State Department would be able to offer Virtual Badge as a free download, from either the Google Play or iTunes App Store, to any US citizens traveling abroad. U.S. Citizens could remotely and securely register information such as a passport number, email address, photo, name, & contact info. This information could be verified by State Department assets who would then authorize credentials for a Virtual Badge® to be sent to the citizen's phone, which badges can be set to auto-expire or be remotely terminated. Verified travelers would download and login to their Virtual Badge® before or during their travel and could even add family members to their badge as well. The Virtual Badge application would then passively reside on the phone until the emergency functions were activated by the US Embassy or the user.

If an attack occured, the Virtual Badge system allows two way enrypted communications. The US Embassy could issue PUSH notifications and alerts to be sent to all US citizens in a country while also allowing these citizens to submit pertinent updates back to an Embassy. Important life-safety information can be instantly transmitted through Virtual Badge®, including citizen locations, injury statuses, important travel routes, shelter in-place orders, and any confidential safety information that Americans might need. In the event of a single citizen crisis, that user also could choose to activate the GPS tracker in Virtual Badge®. In an extraordinary case, the State Department remotely could turn on the VB tracker for a last known location, noting a BOLD alert immediately will notify the user of such an action.

Sample map-view of the Virtual Badge Control Center in-use in Port au Prince, Haiti

A "panic button" also would be available for endangered U.S. Citizens who require immediate assistance from the US Embassy. This action would result in an emergency message being sent to U.S. Embassy personnel with the last known location of that user highlighted on an interactive map in the Virtual Badge Control Center. Embassy personnel could then provide immediate assistance, PUSH a notice, or try and call the user's cell phone. The State Department would also gain substantially increased situational awareness while providing accountability in places where such vital intelligence is at the least overwhelming and normally impossible to get.

For other examples, if a terrorist attack or natural disaster occurs, these verified users could easily document what they are seeing, with customizable assessment forms designed on the fly by the Department of State. Once submitted by a citizen on his/her phone, these field reports are auto time/date stamped and geocoded without the need for cell or Internet connectivity, enabling use during harsh conditions and in remote areas. This information can also be securely transmitted to or shared with foreign authorities, if authorized by the U.S. Department of State.

Virtual Badge® can be installed on a FedRAMP-compliant Government Cloud system or on an authorized server (Multiple vulnerability assessments by federal and DoD units have been performed already on the system). All Virtual Badge data is sent to a secure, web-based Control Center, where administrators have access to situational awareness and GIS-formatted data on simple Google maps or on complex, mapping shape files. This Control Center can be accessed remotely via password, which means a Common Operating Picture is provided to all stakeholders assessing the crisis, from Washington DC to any US Embassy. Virtual Badge® has the capability to handle thousands of reports coming in at once and can even perform instant analysis to prioritze needs, which is essential to properly set up responses by incoming US responders.

For those persons who did not download the Virtual Badge® app prior to traveling, in the event of a crisis, the US Embassy in the affected country could issue a bulletin for all US citizens to download an emergency version of Virtual Badge®. As such a badge would not be pre-authenticated, responders would know that this kind of temporary VB was not a verifiable notification and could proceed accordingly. Integration with the State Department's Smart Traveler app also would be beneficial as a value add.

The vital, trusted communication link and deployment of responders in a crisis could be vastly improved and potentially save lives based on far more accurate information. By providing a clear channel between affected citizens and the governmental entities tasked to protect them, the "tsunami" of data caused by any incident can be mitigated, and thus a clearer picture of actionable information can be ascertained in real time. Duplicative and therefore wasted rescue efforts which plague disasters could be reduced. Safety abroad would be improved.

The State Department is more frequently issuing travel advisories across the world, including all of Europe for the next 90 days. Right now, major news outlets are announcing US citizens are being targeted. Virtual Badge represents unprecedented life-safety and communications benefits for American travelers which could be implemented in a very short time to address the crisis situation facing American tourists and business people abroad today.

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Disaster Solutions, LLC is a SBA certified, HUBZone, small business, founded 11 years ago in 2005, and is the developer of Virtual Badge® ("VB"). Disaster Solutions LLC holds 7 approved, US patents that pertain to Virtual Badge®. VB already has undergone federal software lab testing and also has completed a pre-assessment, security audit for FedRAMP-Moderate Compliance by a US Federal Government Authorized, Third Party Assessor Organization (3PAO). A history of Virtual Badge® use can be seen at www.disastersolutions.cc/history.html.

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