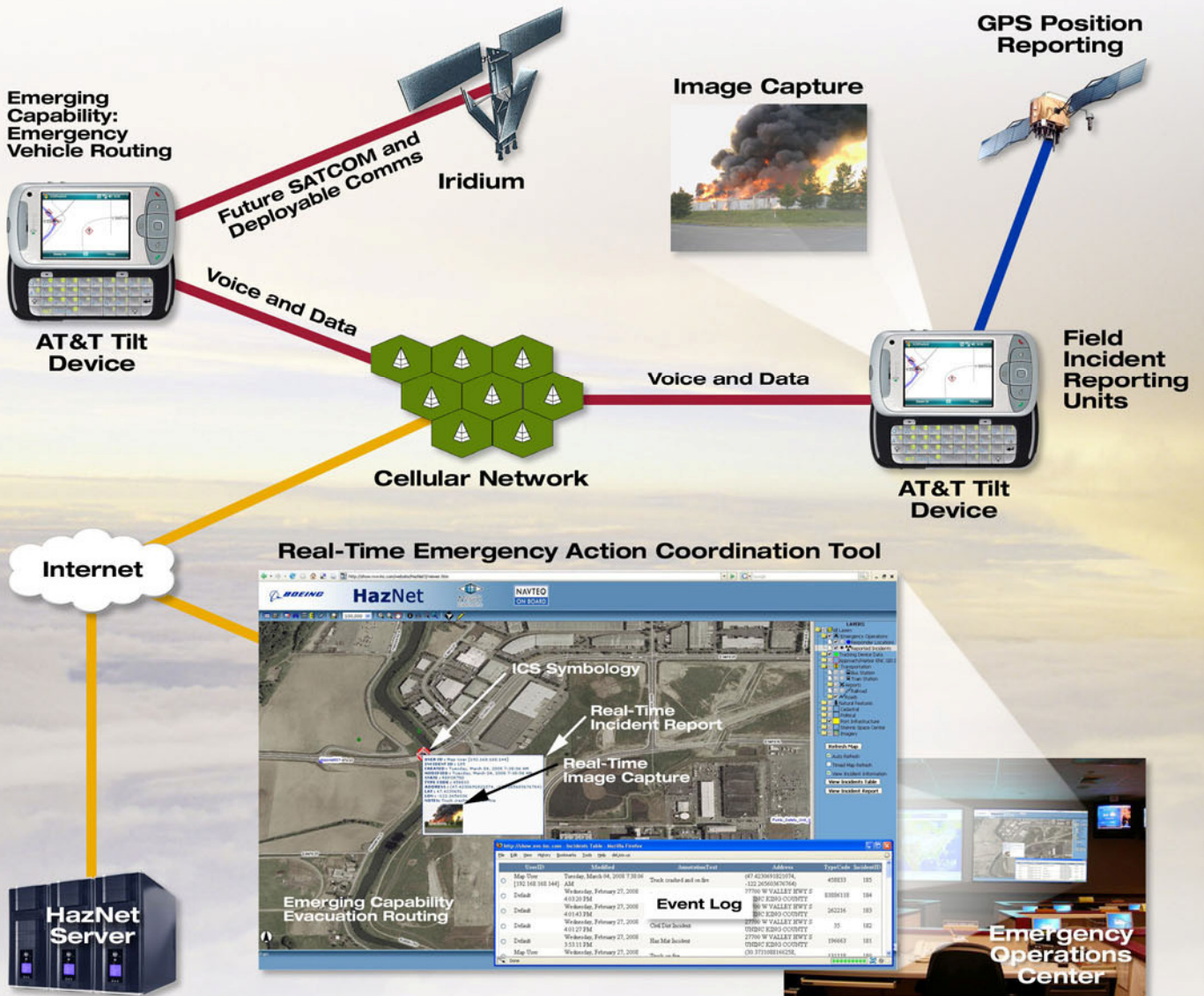


System-of-Systems Architecture (SoSA)

HazNet—Common Operating Picture and Incident Reporting System

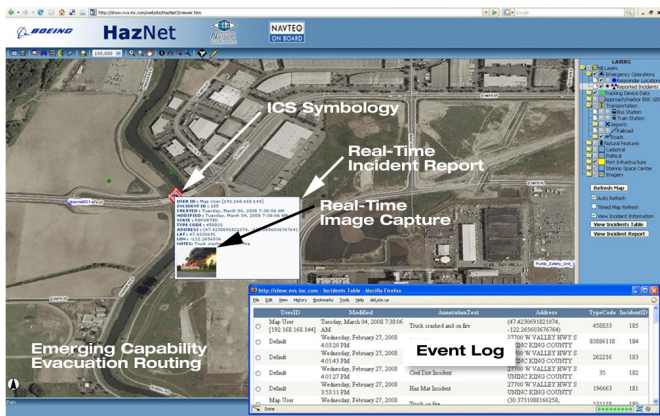


System-of-Systems Architecture (SoSA)

HazNet—Common Operating Picture and Incident Reporting System

HazNet is a Web-based software application linked to portable field units, which provides a real-time common operating picture (COP) for emergency management situations. HazNet has been jointly developed using existing technologies provided by The Boeing Company, NVision Solutions, Inc., and NAVTEQ.

At the core of the system is the Real-Time Emergency Action Coordination Tool (REACT), a Web-based integrated geospatial information system for command and visualization. REACT was developed under a cooperative agreement with NASA Stennis Space Center. It is accessible from any computer with access to the Web, without the need for installation of any software. It receives mixed-media situational incident reports from multiple sources (including hand-held computers in the field), displays the location of emergency response assets, and displays the locations and nature of emergency incidents in real time. It also provides an historical log of events for post-incident analysis. A sample screen view is shown below.



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A key field component of HazNet is the remote incident reporting device consisting of an off-the-shelf commercial smart phone equipped with global positioning system (GPS), camera, voice recorder, touch screen, and real-time wireless connectivity to the REACT server. These devices allow reporting of incidents from the field, which are then displayed on the REACT COP, as well as on all the other mobile devices in the field. A HazNet device is pictured below.



The road network infrastructure is a topologically correct, up-to-date database provided by NAVTEQ. NAVTEQ creates the digital maps and map content that power navigation and location-based services solutions around the world, including those for automotive navigation.

The HazNet system is based on standardized Government formats, nomenclature, and icons. It has been designed for interoperability with existing information systems and tools. Access to the HazNet application requires only Internet access and a HazNet user account. No specialized application software installation is required for access to the HazNet COP. HazNet field units currently operate using Windows Mobile 6.0 with installation of the field incident reporting software, which is capable of being hosted on any commercial smart phone. Communications are Internet Protocol (IP) based and capable of using any wireless provider, including cellular (e.g., AT&T) or satellite (e.g., Iridium). Communications are also capable of operating within existing security frameworks, including firewalls, virtual private networks, and SIPRNET.

In summary, HazNet has the ability to create a nationwide, scalable COP for information sharing from the city level up to the Federal level, which can be used during crisis planning, response, and recovery.

