: What is mobile decision support?

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Mobile devices can empower decision makers. Mobile decision support uses wireless technology and portable computing devices to provide interactive computer-based systems to help decision makers use data, documents, knowledge and models to identify and solve problems, complete decision process tasks, and make decisions. Mobile decision support also includes alerts and information pushed to a user based on location. Operational employees who interact directly with external stakeholders especially benefit from better real-time analytical and business intelligence support. According to Mulholland (2012), the need for mobile decision support is a core driver of new business deployments. Many consumers can also benefit from mobile decision support to assist with purchase and selection decisions, navigation, and negotiations. The mobile web is delivering intelligence and knowledge to decision makers when needed. This major technology change enables decentralized decision making.

A revolution in personal computing is occurring. Smartphone ownership has been increasing rapidly and the technology is now common. Brown (2012) reports 153.9 million smartphones sold worldwide in Quarter 2 2012. Based on a number of sources total smart phone sales globally for 2011 were 472 million or 31% of mobile communication device sales. Year-on-year smartphone sales rose 58% from 2010 to 2011. Nielsen reports that 54.9% of U.S. mobile phone owners have a smartphone as of Quarter 2 2012. Tablet sales are also growing rapidly. Internet connected mobile devices are becoming the standard for much personal computing.

In companies, the most common mobile decision support is to provide data-driven decision support and business intelligence. Mobile business intelligence refers to data-driven decision support applications on mobile devices like smartphones and tablet computers. Please check "What is mobile business intelligence?".

Mobile decision support can provide video conferencing, location based services, real-time analytics based on context, advice, a voice interface, and navigation. Most importantly mobile decision support provides access to decision support applications in the cloud. The cloud has many benefits for decision support and increasingly enterprise decision support systems (DSS) reside in the cloud. The smartphone or tablet is the input/output device that connects to the DSS in the cloud. Please check "What are benefits of decision support applications in the cloud?"

Cell phones made texting and tweeting possible. Smartphones enable more sophisticated alerts. An

alert could be a simple text message or a more complete message pushed to a user. In many cases an alert box pops up on the mobile device with a message and the user must click "OK" to proceed. An alert can be a powerful, contingent decision making intervention.

The basic terminology of mobile phones is widely understood. More formally mobile computing means computing technology that can be moved freely or easily from place to place. A mobile phone is an electronic telecommunications device that connects to a wireless communications network through radio wave or satellite transmissions (cf., Webopedia). Mobile device is used as a generic term for a variety of hardware devices that people use for voice communications and wireless access to data and information. Smartphone means a wireless phone with computing capabilities.

Researchers have much to learn about mobile decision support. We need to study alternative input and output including pen, touch and voice interface in mobile decision making use cases. Also, a mobile device with sensor attachments provides many opportunities for innovative decision support. Researchers need to examine innovative input including photos and biometrics like heart rate. Mobile decision support also may create major problems like stress and addiction. We need to study how people can "unplug" from decision support. Mobile devices create many opportunities for design research with the development of new capabilities and innovative applications. Researchers will need to explore many security issues related to the hardware, the information transmitted wirelessly and stored in the cloud, and software use security. Password and encryption will likely be supplemented by biometrics.

Mobile decision support is an exciting innovation that combines a small computing platform with wireless access to a cloud of decision aiding software and data resources. Decision support can be with us almost anywhere and at anytime.

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