

## **Multimodal Integration The Boeing Company Perspective**

The Boeing Company, as a large global enterprise, must ensure that data and information is accessible to employees, customers, partners, and suppliers anywhere, anytime, and in an easy to use form. This vision is fully in line with the pursuit of the Multimodal Interaction concept - being able to interact with the Web anywhere, any time, and with any device.

There are two primary areas of interest where the application of these principles can add to improvements in efficiency and effectiveness:

- The office environment
- The factory environment

As a complementary activity within The Boeing Company, planning efforts are underway to modify the manner in which data and information is accessed; moving towards Web access for the retrieval of all data and information.

The office environment:

The primary goal is to enable mobility and provide the knowledge worker with the necessary tools to access data and information at whatever location the necessary work is being performed at. A key element is the ability to receive this data and information onto any type of device that may be used. Thus, the content needs to be adaptable to the characteristics of the device being used; be that a screen size issue, a browser issue, etc. Interoperability between various devices and form factors may also be an issue. All of this should appear seamlessly to the end user and be easily integrated from an Information Technology (IT) perspective.

The factory environment:

The primary goal is to reduce the time span between the need for data and information at a work location and the actual accessing of material. The key goal is for the required data and information to be delivered to the requestor directly at the location where the work is being performed, rather than having the requestor go to a central site to look up this material. Thus, device types and modes of interaction all come into play. As in the office environment, interoperability is an issue. Form factors, as well as types of interaction (e.g. speech, tablet, etc...) will differ depending upon the job function in the factory environment. The end goal is a

seamless transition to the factory worker and ease-of-integration from an IT perspective.

In summary, The Boeing Company is particularly interested in the integration and connectivity of multiple device types via multiple interaction types. We desire straightforward integration between form factors and a seamless transition between interaction types with a particular emphasis on standards with regard to the authoring of multimodal applications.