Workshop

I Have an App for That: Introduction to Mobile Application Development in Horticulture

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The adoption of mobile smart devices by the general public is rapidly increasing. It has been estimated that more than 100 million subscribers in the United States now use smartphones (Bae et al., 2012). This represents an opportunity for deploying horticulture-related mobile applications, or “apps,” for research, teaching, and extension. What is an app? The name is an abbreviation for “application,” a piece of software that is specifically designed to run on a mobile device, such as a smartphone or tablet (Salz and Moranz, 2013). An app is typically downloaded and installed by the device owner. Such “native” apps run in conjunction with the device’s installed operating system (OS) and require an Internet connection only if a web-based service is necessary. Some examples of mobile OSs include Google’s (Mountain View, CA) Android OS, Apple’s (Cupertino, CA) iOS, and Microsoft’s (Redmond, WA) Windows Phone OS. Alternately, an app

can simply be a webpage that is optimized for viewing on a smart device with access to the Internet; i.e., “web app.” Native apps are typically distributed via a third party, commonly known as an app store. Web-based apps are represented by icons on the device’s screen that direct the user to the webpage. Apps can be downloaded freely or are available for purchase. Some apps allow users to purchase “in-app” content to gain access to additional features. As the trend toward mobile learning and support grows, it is important for horticulture professionals to be aware of horticulture-related apps, and how these apps are developed, distributed, and installed.

The overarching goal of this workshop is to provide an overview of the design, development, testing, and deployment of mobile apps with emphasis on horticulture-related functions. The first paper provides an overview of how apps are downloaded and installed on a mobile device. It describes how to search for apps with specific functions. Some examples of horticulture-related mobile apps will be presented. These include food safety, geographic information systems, image enhancement, hydroponics, insect scouting, turfgrass management, plant growth

regulator calculations, landscape design, and plant and tree identification. It outlines how to find these apps and describes the general procedures involved in downloading and installing these apps.

The remainder of the session will be devoted to the presentation of two related papers by a multidisciplinary team representing different institutions. This team has the unique and valuable experience of releasing two versions of a mobile app designed for horticultural professionals and the home horticulture market, respectively. The first paper will provide an overview of app development from conceptualization, to planning for programming and other costs, to user interface design using the team’s experience as a model. This presentation underscores the fact that app development is a dynamic process that requires detailed planning and close coordination among team members. The last paper will focus on testing, launching, and promoting an app. Proper testing and a well-planned promotional campaign are seen as key steps in releasing a properly functional app to the appropriate markets. The team’s real-world experience underscores the significance of the suggestion by Salz and Moranz (2013) to “build relationships, not just apps.”

The papers from this workshop provide unique lessons in the development and deployment of horticulture-related apps and help to provide guidance for others who are interested in developing apps to promote research, teaching, and extension.

Literature Cited

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