Building mobile applications is as complex as building any other commercial application—sometimes more so. The fast-paced proliferation of mobile devices & increase in velocity of mobile OS & app releases is putting tremendous pressure on application development process. At the same time app developers need to create a unique user experience leveraging native device features while maintaining the consistency of application across diverse devices & platforms using web standards like HTML5. All this creates complexities that make mobile application development costly, resource-intensive and time consuming. Hy5 Canvas aims to address these challenges.

TCS Hy5 Canvas is a mobile application development platform that enables you to adopt a hybrid approach in mobile applications development. The platform allows users to exploit the powerful native features of the mobile device, while adhering to the web standards such as HTML5, CSS and Java Script. With Hy5 Canvas, applications don’t need any specific coding or scripting to run on any modern mobile device. It’s a complete IDE, delivering the full functionality you need at every step of mobile application development, and the intelligence to relieve you of costly, repetitive effort.

Key Benefits

**Integrated Development Environment**
Hy5 Canvas provides the full environment you need for designing, coding, previewing and generating mobile apps.

**Standardized Platform**
Hy5 Canvas complies with standard web technologies such as HTML5, CSS 3.0 and Java Scripts. No proprietary coding or scripting methods are required. This use of a single, standard codebase ensures your application looks and operates identically on every device that runs it.

**Hybrid Application Development**
Hy5 Canvas lets you build an application entirely in HTML5, or as a hybrid with native device wrappers to integrate device-specific functionality.

**Reduce time to market**
With a single codebase and the tools to automatically create OS-specific versions from that base, you’ll reach every market faster, and launch to all at the same time.

**Reduce Costs**
Control development costs through the integrated design environment, single codebase development and maintenance, automated code development for specific devices, and seamless integration with Hy5 Test™, the TCS Mobile Application Testing Platform.

**Key Features**
Here’s a brief overview of what you’ll find within the Hy5 Canvas Mobile Application Development Platform.

**Application Designer**
Hy5 Canvas includes a drag-and-drop design canvas for selecting and positioning User Interface elements, setting up event handlers and Java Script call back functions, specifying aesthetic properties and more. A preview feature lets you view the code directly from the web server.

**Native Wrapper**
The Hy5 Canvas Native Wrappers for iOS, Android, Blackberry and WP7+ add to your web-standards code the device features that can only be accessed through native code. Native Wrappers let you deliver...
the complete, native-application user experience. Hy5 Canvas Native Wrappers support GPS, Camera, Accelerometer, contact lists, media files, push notifications and more. In a hybrid environment, the HTML5 component can access the native features, and native code can callback the HTML5 JavaScript code.

**Device Detection and Content Switching**
Applications automatically detect the device (for instance, iPhone or iPad) that originates a request, and then format and otherwise adjust the data to ensure optimal user experience.

**Compression and Decompression**
Maximize application performance by securely compressing and decompressing data as it travels from the device to servers and data sources.

**Backend Adapters**
Adapters enable your application to communicate with backend systems. Information from various enterprise systems can be consolidated by implementing new adapters without having to change front end code.

**Analytics**
Hy5 Canvas has in-built monitoring that ensures system availability and captures the transactions on which its analysis is based.

**Solution Accelerator Components**
Hy5 Canvas contains a range of optional components to enhance application performance and functionality. These components are exposed as a set of services using Service Orientated Architecture (SOA) principles.

**Synchronization**
Data is synchronized between the device database and the backend data store. Changes made to either will be detected and replicated on the other.

**Authentication**
Hy5 Canvas provides a common authentication component with different backend adapters to connect to the active user directory services.

**Push Notification**
This is a very critical service that maximizes the power of mobility yet with the instant information update.

**Security**
Hy5 Canvas enables a secured tunnel for encrypted transactions between the device and the backend system. Further, it lets you encrypt and securely store data on the device database.

**Comprehensive Mobile Application Development**
Hy5 Canvas delivers a fully integrated development environment for your mobile applications-allowing you to deliver web-standard applications that integrate native device functionality. Alone, it’s a highly efficient way to develop cross-device mobile applications. Used with Hy5 Test, it’s part of a complete application development and testing solution.

**About TCS Mobility Solutions and Services**
TCS Mobility Services provides a suite of frameworks, solution accelerators and technology services. We help enterprises rapidly and cost effectively develop, test and manage mobile applications, data and device environments across heterogeneous mobile platforms.

To learn more about how you can build mobile applications more efficiently and cost effectively with Hy5 Canvas, contact us today at mobility.solutions@tcs.com