



Best Practices in Mobile Web Design



Mobilizing vs. Miniaturizing

Introduction

If you are reading this primer, then you already know that Software-as-a-Service (SaaS) is flexible, cost-effective and can be delivered regardless of platform to any user with a Web connection and a browser. When SaaS is done right, the time, cost and support savings over the traditional application approach to software delivery can be significant. The SaaS distribution model also provides a level of flexibility that addresses rapidly changing business and user needs, in a way in which stand-alone applications cannot compare. What you may not be aware of is Mobile SaaS. What is it and how does it differ from SaaS? Simply stated - the client-side device is smaller. That's it.

Until recently, mobile users have been supported primarily by large organizations building mobile applications for each and every platform. This includes application definition, design, development and testing for each mobile platform. The mobile apps must then be connected to a server-side application via a dedicated communications channel. This approach is time-consuming and costly. Using Mobile SaaS, organizations of any size, may now cost-effectively support both fixed and mobile users, from a single set of Web application business logic – using the browser. The time and cost savings over the traditional connected mobile application approach can range from two to ten times, depending on the complexity of your Web service.

In this primer, we discuss the three key components to successful Mobile SaaS deployments:

1. Leverage: Using a single set business logic to support desktop & mobile users
2. Mobilizing vs. Miniaturizing: Mobile SaaS features, presentation & navigation
3. It's All About the Data: Mobile metadata, what is it and why should I care?

When it comes to the Mobile Web, thinking smaller is not enough. Delivering effective mobile SaaS solutions requires more than a miniaturizing process. The Web service must be “mobilized”. In other words, you must consider the context of how mobile users differ from desktop or laptop users. You must address issues of performance, privacy and personalization – the 3Ps to mobile Web success. Will the location of your mobile user impact the relevance of your service or Web app? What device limitations (screen size, keyboard, no mouse, battery life) must you overcome to ensure users have a positive experience? What features of your existing service will a mobile user actually use? How can you reduce the risk of mobile users abandoning a transaction or ignoring corporate data policies? These are the questions we will address in our Mobile SaaS Best Practices primer.

Leverage: One Web app supports desktop & mobile users

You've selected the Web or SaaS approach to support your business model or mobile workforce. More than likely, you adopted SaaS to save your organization time and money, provide more flexibility to support rapidly changing user needs and to simplify distribution and maintenance across multiple platforms. Build once and reach everyone – you're reading this, so you already appreciate the value of SaaS. So why not take all that SaaS infrastructure, add a little something extra to the business logic that says, “if it's a mobile device do this, if it's a desktop device do that. Voila! You have now extended your Web apps to mobile. Okay, that's a little over simplified, but not by much.

What users may see on their screen is different, but orders are transacted the same way by the inventory and financials apps regardless of the user's device. Data is still deposited and pulled from the database. The search engine keeps on searching. So whether you have dynamic content generation,

which, can be optimized on the fly for each device, or have designed distinct desktop and mobile Web pages – the business logic driving the application access and the applications themselves, remain unchanged. Desktop SaaS or Mobile SaaS - the same input is required and the same results are delivered - only what is presented changes. So what should be presented?

Mobilizing vs. Miniaturizing - SMSP

To effectively extend all or part of your SaaS applications to mobile users means understanding that Mobile SaaS is more than simply miniaturizing a Web page to fit on a mobile screen. Mobilizing a service requires Product & Service Managers to think mobile:

Simplify. Minimize. Standardize. Personalize.

Mobilize

1. Keep it Simple - Defining the Mobile Feature Set

Here are some questions to ask yourself as you begin defining the mobile requirements for your existing SaaS application:

- ✓ What will a mobile user actually do when they visit your Web site or login into your Web service?
- ✓ Is your service simple or complex?
- ✓ Will mobile users actually use every feature?

In the case of a Web service like search, things are straightforward – a user enters a search term and the results are provided. But what if you delivering SaaS-based sales force automation, CRM or emergency services applications? You may have dozens of features and actions a user could take. It is unlikely, that a mobile user will use any feature, which requires excessive typing or relies upon data that is not readily available to them. If it takes a lot of time to complete a transaction, what are the likely abandonment rates?

Literally, put yourself in your mobile users' shoes and hit the streets with your smartphone or PDA & see what you might tolerate. You'll drive greater use, customer satisfaction and employee compliance with any corporate policies or processes.

2. Minimize Data Entry Convenience Drives Use

Before you start defining your mobile features, pick up a mobile device and start typing. Type your name. Type your password. Type your email address. Anyone up for an address? Try your credit card number. Are you frustrated yet?

How many mistakes did you make? Did you count how many key punches in total, when you consider cap, symbol and number shifts? How long did it take? Also, while it's a very, VERY bad idea, what would happen if you tried typing this data while walking or driving at 60 MPH?

If it's easy and convenient to use your service – it will get used.

Remember the 0-1-2-3 rule:

- 0** - Zero Behavioral Changes – nothing new to learn
- 1** - Single Logon – for any of your services
- 2** - Two Second Response Time
- 3** - Three Clicks to Relevant Content

Assuming your mobile users find your service valuable, reducing data entry is the simplest thing you can do to remove barriers to use.

3. Standardize Navigation - Learning from Mobile App Developers

One area where mobile applications excel is typically the user interface (UI) and navigation. Nearly every application that offers more than a single function uses the menu key to pop up your options. Icons are great on the home device screen, or for launching an app, but once in your application, every icon you add reduces the available space to deliver your content. The mobile application developers got this one right. There are some very good lessons that can apply to Mobile SaaS development.

Take a look at your mobile browser. While the options may differ by OS, they all use the menu key to pop-up options for the Address Bar, Add a Favorite or Refresh the screen. When you think about Mobile SaaS navigation, think about a user taking a specific action. In a SaaS model, the action typically presents a new Web page, but that new page (unless purely informational – such as your privacy policy) should be driving an action. Examples of good mobile SaaS navigation options include: Download PDF; Open Customer File; Approve Time Sheet; Request a Quote; Book Tickets; Debit my Account.

In the traditional SaaS and Web page world, menus, tabs, icons, banners, buttons, pictures, logos and hyperlinks can all be used to navigate from page to page. On mobile, not all browsers present these items the same way, if at all. Without a mouse, a user must scroll with a thumbwheel or trackball or use a rocker switch to pass through each and every navigation option until reaching the desired link. Missing or skipping a link is a frequent occurrence. If your user is fortunate enough to have a touch screen, is your icon or link big enough for fat fingers? Are they too close together to ensure the right link is selected? And if they are big enough, how much space is now left on the mobile screen to present your content? These are all factors that must be considered when defining your Mobile SaaS UI (a fancy word for mobile-optimized Web page) and navigation strategy. Standardizing navigation for mobile users improves usability. Keep it simple. Keep it consistent.

Another approach to consider is the browser menu. 5o9's software offers SaaS providers the unique capability of customizing browser menus for each Web page – on the Web page itself. This allows users to navigate using the browser menu (like a traditional mobile app), but gives you the SaaS flexibility of updating services and navigation with a simple change on your Web page. Depending on your business logic, you can fix the menus per page or dynamically generate the menus based upon each mobile user. If you build mobile apps, each time you modify your service, you have to consider the time and expense to upgrade your application on all platforms and re-deploy it to every mobile user. This is just one more good reason to consider Mobile SaaS.

4. Personalize Your Content – Make it Relevant

Mobile is personal. Mobile is small. Mobile is now. Mobile is, well, mobile.

Given these mobile realities, it is critical that what is delivered is relevant to the user, their device and their current location. Every SaaS provider and their users will view relevance differently. Here are few examples to get you going:

- ✓ Vacationers aren't searching for the top 100 Caribbean vacation spots on mobile. They did that before they left home. They need nearby activities, ideally with discounts for hotel guests.
- ✓ A sales rep standing in an empty tradeshow booth only cares about the boxes that should have arrived two hours ago, not the other 2 shipments going to the next show.
- ✓ Don't send your visitor a Flash-enabled Web page if their device doesn't support Flash – a sure way to disappoint.
- ✓ Restrict access to sensitive company data based upon the user, location or an active micro SD card slot. A lot of confidential data is lost on those little guys.
- ✓ If the battery charge is down to 5%, why not warn your user before they attempt downloading a large file – seriously, they'll thank you for not wasting their time.

Personalizing a service, or making it relevant to any given user or set of users is dependent entirely upon your SaaS solution, business goals and user needs. There exists no right or wrong way to personalize Mobile SaaS, other than to make your content relevant -relevant to a user's privileges and the task at hand, relevant to their device, relevant to their location. So how can you stack the deck in favor of relevancy? Know your user, their device capabilities and their location every time they visit your Web service.

It's all About the Data (metadata, actually)

Personalized, relevant, Mobile SaaS is possible if you know the three W's – Who, What & Where. Who the mobile user is, where they are and what their device is capable of – in real-time. The possibilities are limitless. As you define your Mobile SaaS services, consider what data you need and/or want to personalize and monetize your SaaS solution. Key data related questions to answer (and some example metadata) include:

1. What information do you need to know to deliver your Mobile SaaS solution?
 - a. It's a mobile device
 - b. Device type
 - c. Device model & OS version
 - d. Screen size, resolution & colors
 - e. Attached sensor devices or biometric authentication data
2. What level of information are your mobile users likely to know and how does this map to your needs?
 - a. City/State
 - b. Zip/Postal Code
 - c. Cell Tower ID number
 - d. GPS coordinates
 - e. Cell carrier
3. What information are your mobile users willing to enter on their tiny keyboards?

4. What information are users willing to leave on your servers?
5. What information do you want to keep on your servers and what liability is associated with that information?
6. What information do you need to manage privacy, security or asset tracking policies?
7. To what level do you want to customize or personalize your Web services?
 - a. By individual visitor or subscriber
 - b. By device type
 - c. By geography
 - d. By subscribing company?

The answer to these questions will be different for every SaaS offering and organization. Taking the time to answer them before finalizing your mobile strategy will provide greater relevance for both your organization and your mobile users. It will ensure that you achieve your unique goals for mobile employee productivity and mobile customer satisfaction. Be sure to consider future needs to minimize your updates and development costs.

Simplify. Minimize. Standardize. Personalize. Mobilize...

With some solid planning, a little creativity, the right data, and a few simple best practices your organization can deliver exceptional Mobile SaaS solutions to augment your existing Web services.

... so you can monetize your Mobile Web solutions today.

A Great Mobile Web Experience Begins with the 3Ps

Using basic browser information when a mobile user comes to your site can help you distinguish a mobile user from one who has a desktop, keyboard and mouse. Web forms may certainly be used to capture user-entered data, but what is done without a thought on a full-sized keyboard, gives mobile users pause and can drive up abandonment rates and drive down compliance. Considering performance, privacy and personalization in your mobile Web strategy improves the user experience and makes a difference to your bottom line.

3PMobile is a software company that enables enterprises with mobile initiatives to quickly and cost-effectively extend their SaaS investments to mobile customers and employees - without adding IT complexity. 3PMobile™ software uses the Web to deliver real-time user, device and location data from smartphones to a Web server for use by any Web application. That data can be used to manage, in real-time, performance, privacy and personalization – the 3Ps to mobile Web success.

For more information contact us at info@3pmobile.com or call (303) 938-1769

