17655: **Discussion: The New z/OS Interface for the “Touch Generation”**

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Europe 2 (Walt Disney World Dolphin)

Speaker: Geoff Smith(IBM Corporation)

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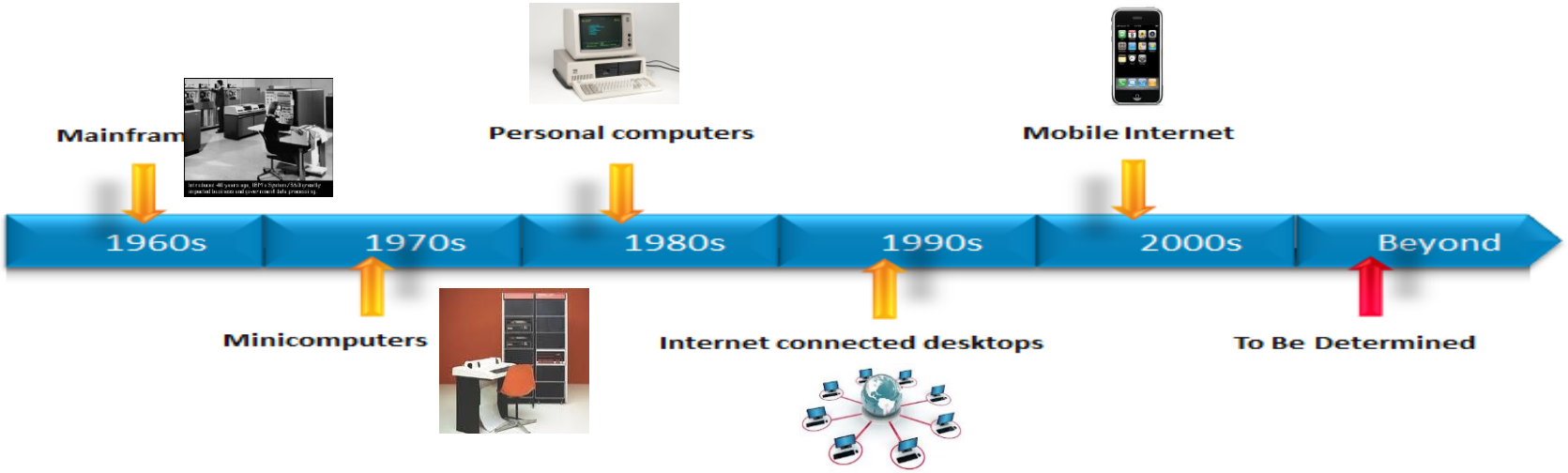
Abstract

- The next generations of z/OS System Programmers have grown up with touch interfaces. How can we simplify the interface to the mainframe to make it tablet and mobile friendly and ready? Do we need an ISPF app? Are there already interfaces that we can learn from? What infrastructure will we need to enable the “touch” generation? This is a fast paced roundtable discussion.

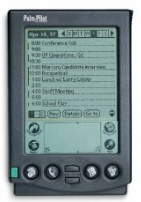
First: A Little Historical Perspective



1. **1960's brought Mainframes (IBM)** - They were very powerful and adaptable. As Apple would do later on IBM owned the operating systems and hardware. They were expensive, cost millions of dollars and had thousands of customers -- typically only big business, banks and insurance companies, government, the military and scientific computing communities could afford them.
2. **1970's Mincomputers (DEC, Sun)** - These were less powerful, smaller, interactive, smaller and less expensive. They were used typically, by mid-size businesses and colleges. Tasks included process control, computer aided design, and they popularized e-mail. They also fostered the development of UNIX.
3. **1980's Personal Computers (Microsoft)** – First popularized by the introduction of the IBM PC in 1981. They established the IBM-Intel standard. The well documented architecture lead to manufacturing competition which quickly drove down cost. This was the first affordable computer for the consumer.
4. **1990's Desktop Internet (Google)** – Introducing the Browser to desktop and laptop computers opened the door to the Internet. Initially, in 1996, there were only 16 million users today that number is over 2 billion internet users and growing. The Internet not only connected millions of users, but it also provided free open access to a wealth of new resources.

The Fifth Wave - Mobile Internet

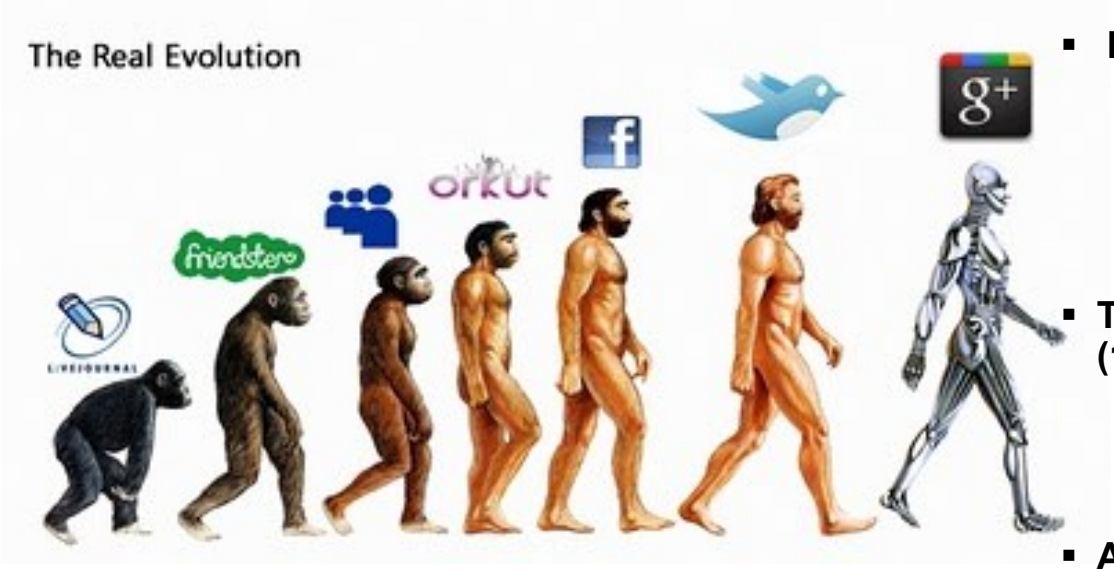
- **Mobile 1.0**: First generation Smartphones like Trio and Blackberry. Windows XT tablet edition. These were adopted the by business and tech savvy consumers, but were either too complex or expensive to gain rapid adoption by the general public.

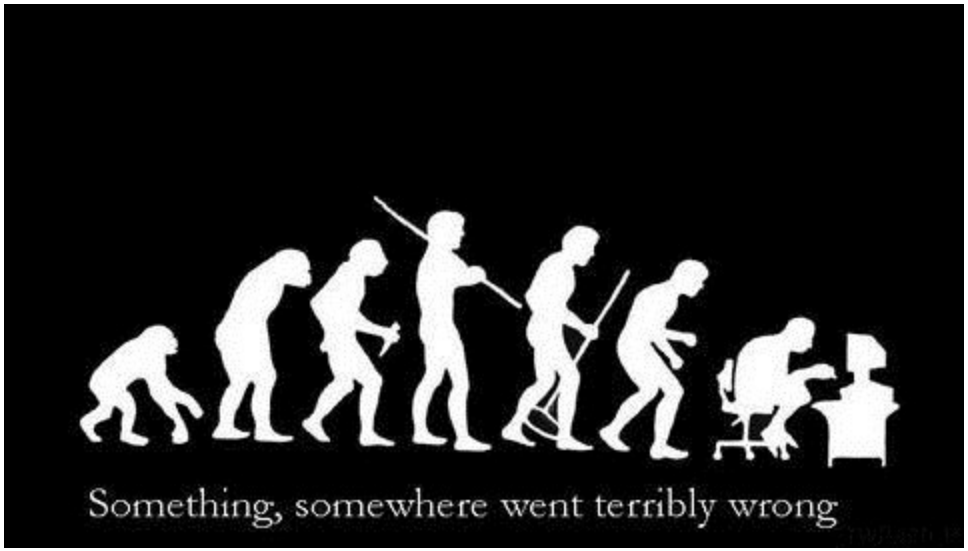


- **Mobile 2.0**: Was heralded by the introduction of the iPhone and later the iPad and Android devices. Key features included:
  - Always on, always connected to the internet,
  - A simple apps touch based interface that made operating them intuitive.
  - Apps development environments /stores for Apple and Android changed the way software applications were created and sold
  - Web browsers that scale with pinch and zoom
  - Long battery life
  - Now so affordable they are everywhere.

IMHO: Mobile Internet

- **Mobile 1.0**: First generation Smartphones like Treo and Blackberry. Windows XT tablet edition. These were adopted the by business and tech savvy consumers, but were either too complex or expensive to gain rapid adoption by the general public.
- **Mobile 2.0**: Was heralded by the introduction of the iPhone and later the iPad and Android devices. Key features included:
  - Always on, always connected to the internet,
  - Apps simplified the user experience and made using these devices even easier
  - Apps development environments /stores for Apple and Android changed the way applications were created and sold
- **Mobile 3.0**: ?
- Some trends already underway:
  - Competition is forcing prices lower will continue to put mobile in everyone's pocket
  - Tablets and smartphone seem to be overtaking laptops as the primary device for consumers to connect to the internet.
  - As cellular become faster and more pervasive cloud storage is making easier to leave now bulky laptops behind
  - **Everything is being connected to the internet – your TV, your car, your pacemaker, your home**





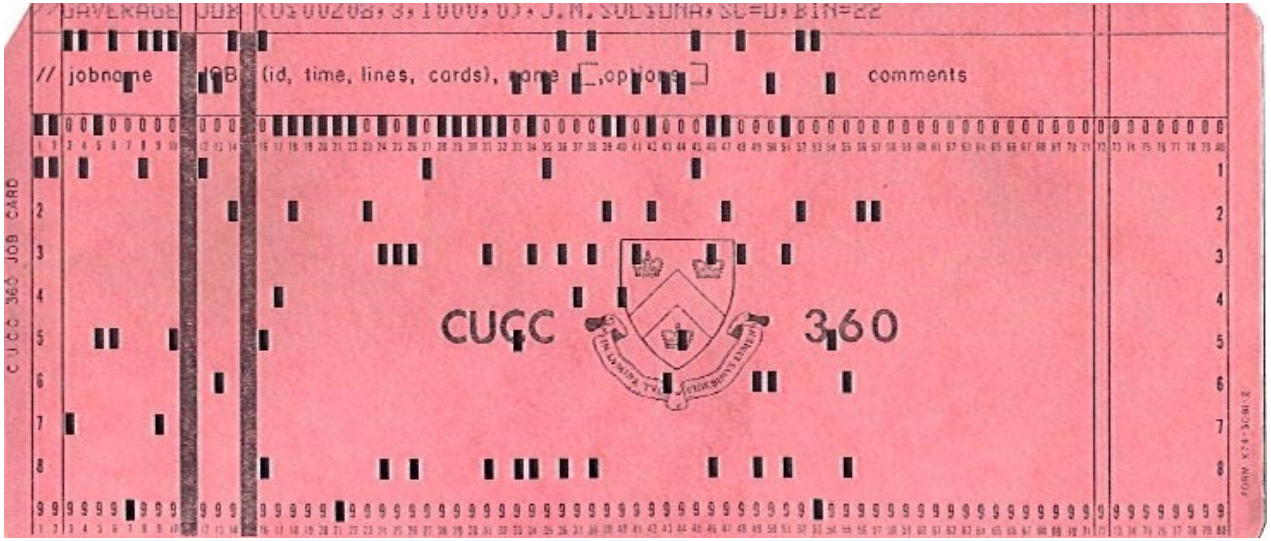
- **First there was Batch (1945-1968)**
  - **A user would submit a program on a series of punch cards,**
  - **the computer would run the program at some scheduled time**
  - **results would be picked up hours or even days later**
- **Then came the Command-line (1969-1983)**
  - **Users enter commands on a text-based terminal in real-time called Time Sharing Options or TSO, an interactive command line interpreter**
- **And on to the Graphical UI (1984 and after)**
  - **Menu-based**
  - **Interactive Systems Productivity Facility or ISPF: a menu-based application for building software that runs under z/OS**
- **What's next?**

Progression of the “User Experience”

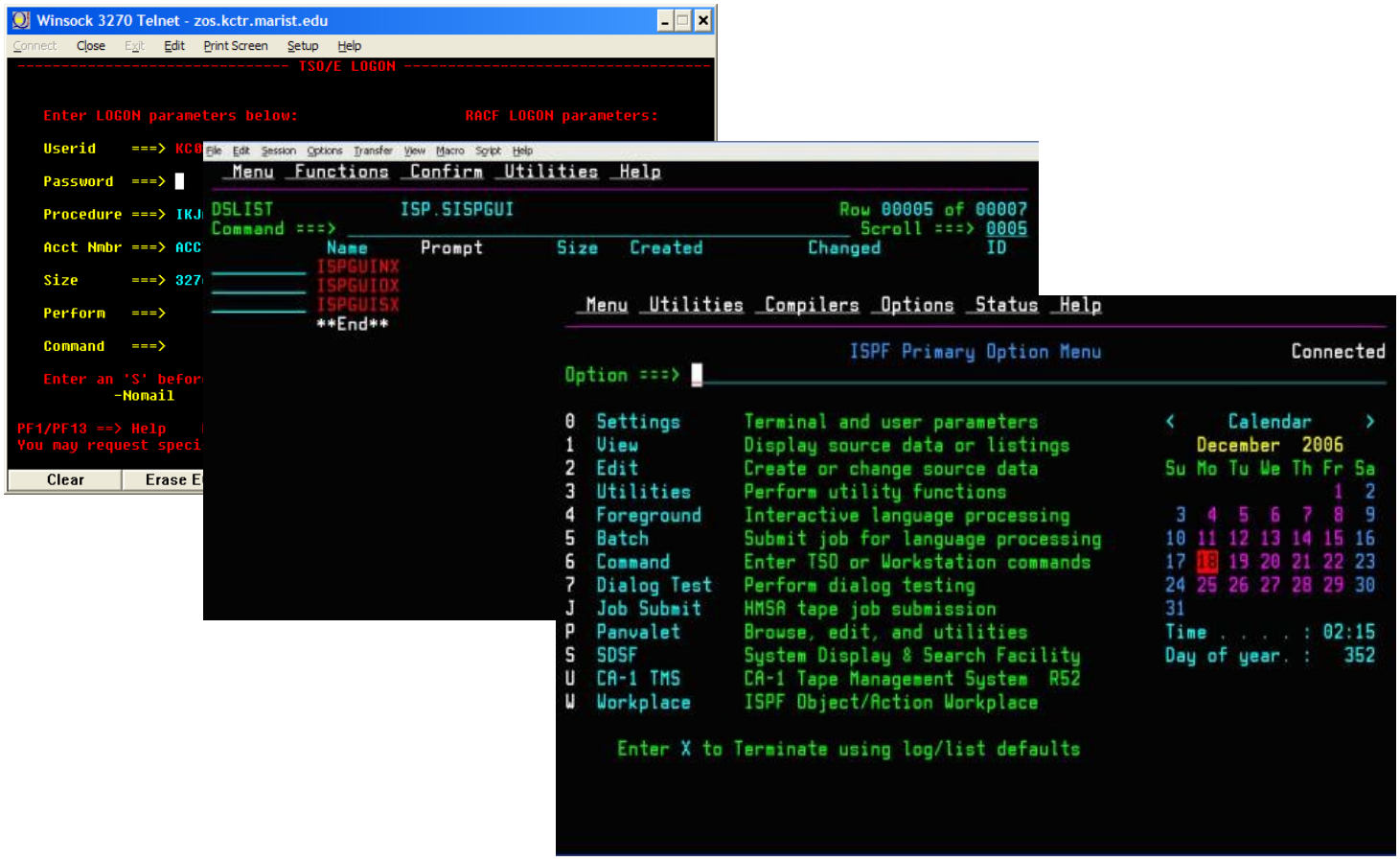
Gen	User Experience for Sys Progs and others running machines
1.0	Punched cards and lots of waiting
2.0	Interactive terminals and less waiting
3.0	Terminal emulators on Windows, Mac OS/2 or Linux apps
4.0	Desktop applications/consoles for specialize tasks
5.0	Specialized applications in web browsers
6.0	For Smartphones and Tablets, terminal emulators some specialized applications for for the most part, GUIs inside web browsers

	User Experience for consumers
1.0	“Green screen” or later Green screen with multiple colors
2.0	Windows, Mac, OS/2, or Linux GUI apps
3.0	Mostly GUIs inside a browser – some native apps running on iOS, Android, Windows, Linux, and so on

Remember these?

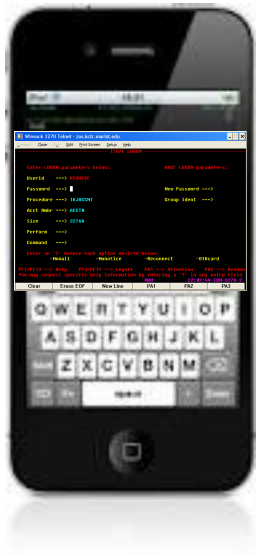


TSO and ISPF



And next, the face of the mainframe on iPads and iPhones

The New TSO



Really???

Examples of Administration Panels

User interface design for the mobile web

http://www.ibm.com/developerworks/library/wa-interface/

Systems Programmers of Tomorrow

- Have never known a world without computers, the Internet, smartphones tablets and visual applications
- Don’t know what a “Green Screen” is
- There’s a good chance, they don’t know what a “Mainframe” is or if they do know, they probably think they are don’t exist anymore.
- Do pretty much everything with “APPS”
- Are constantly connected and in contact with their peers.
- Have the expectation that all computers are “walk up and use” – After all, by the time they where 2 years old had “learned how to use one”.

Never Fear

Once they learn about mainframes, they will learn and respect the:

Efficiency

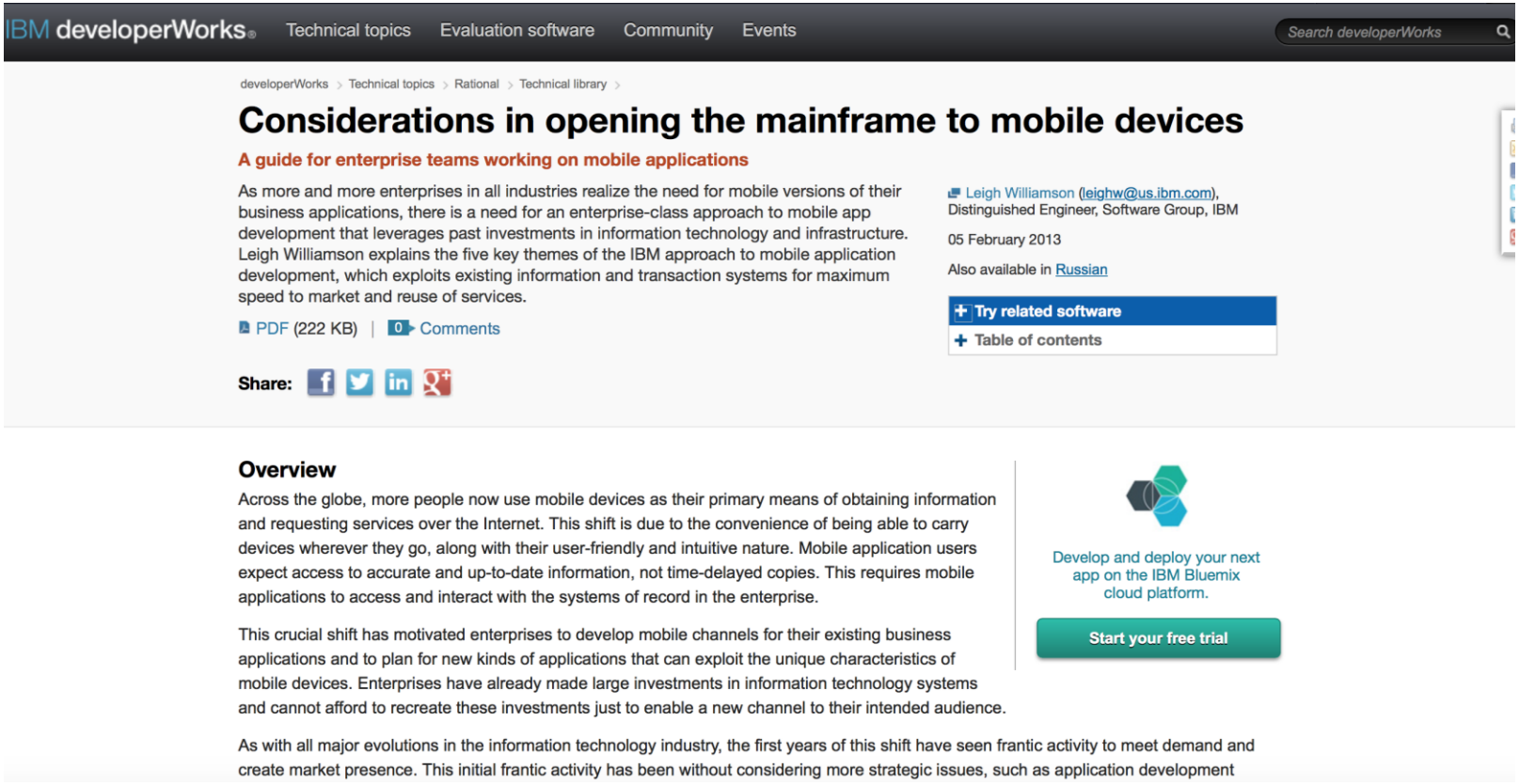
Power

Resilience

New Technology and New User Interfaces

- The 2nd generation Smart Phone and Tablet hardware along with advances in cellular and networking have brought us
  - Portability
  - Always online
  - Always connected
  - Long battery life
  - A very powerful computer in your pocket.
- The iOS, Android, Windows and other Mobile platforms brought
  - APPS! No heavy clients with office suites
  - Data and apps in the Cloud
  - Pinch and zoom
  - Gesture control
  - Voice recognition
  - Cameras
  - Video cameras and players
  - GPS
  - Facial recognition

Application Development Impact



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Considerations in opening the mainframe to mobile devices

A guide for enterprise teams working on mobile applications

As more and more enterprises in all industries realize the need for mobile versions of their business applications, there is a need for an enterprise-class approach to mobile app development that leverages past investments in information technology and infrastructure. Leigh Williamson explains the five key themes of the IBM approach to mobile application development, which exploits existing information and transaction systems for maximum speed to market and reuse of services.

Leigh Williamson (leighw@us.ibm.com), Distinguished Engineer, Software Group, IBM

05 February 2013

Also available in Russian

PDF (222 KB) | 0 Comments

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Overview

Across the globe, more people now use mobile devices as their primary means of obtaining information and requesting services over the Internet. This shift is due to the convenience of being able to carry devices wherever they go, along with their user-friendly and intuitive nature. Mobile application users expect access to accurate and up-to-date information, not time-delayed copies. This requires mobile applications to access and interact with the systems of record in the enterprise.

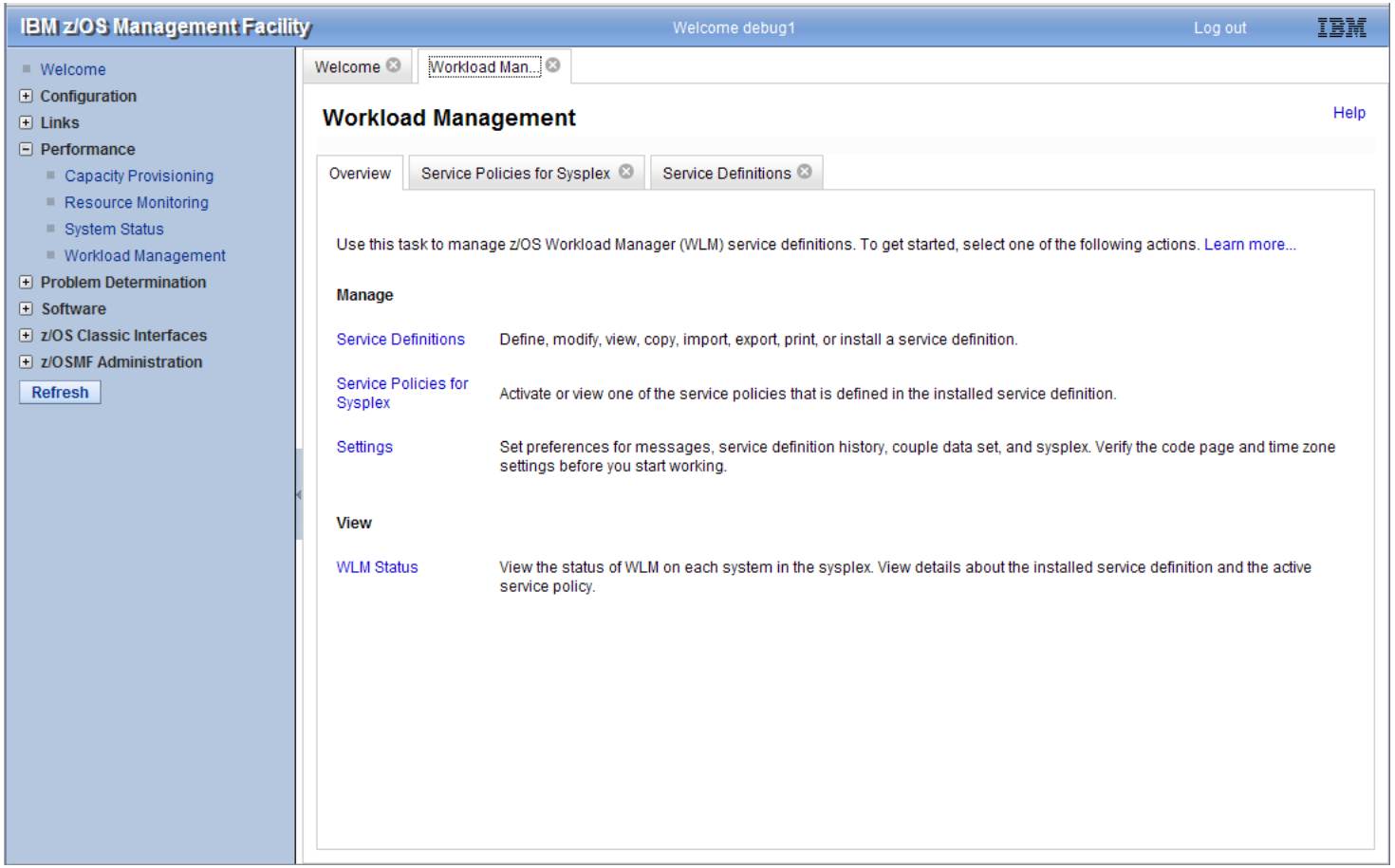
This crucial shift has motivated enterprises to develop mobile channels for their existing business applications and to plan for new kinds of applications that can exploit the unique characteristics of mobile devices. Enterprises have already made large investments in information technology systems and cannot afford to recreate these investments just to enable a new channel to their intended audience.

As with all major evolutions in the information technology industry, the first years of this shift have seen frantic activity to meet demand and create market presence. This initial frantic activity has been without considering more strategic issues, such as application development

http://www.ibm.com/developerworks/rational/library/enterprise-teams-mobile-application-projects/

Administration of the Mainframe – Today z/OSMF GUI

Can administration be improved leveraging tablets?



System z + QR Code + Mobile Device

QR Code Label on Machine

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App: Scans QR barcode label on System z machine with camera

Allows person on the IT floor to grab just a subset of information about the machine.

Quick path to customer definable body of information that is appropriate for the user.

CPC Views

Ensemble CPC Views

Classic CPC Views

IBM One UI

IBM's design system for realizing exponential business value by driving great and consistent design across our portfolio.
Steve Mills, Senior VP

Discussion points

- Have you experienced good mobile interfaces for the mainframe?
- How important is a mobile option for z?
- What is your favorite/best UI? What is it that you like about it?
- What security concerns are most important to you?
- What types of monitoring and management tasks would you like to be able to perform using a mobile device?
- Would you like tasks specifically designed for a particular device (i.e., iPhone, Android, or tablet) or do we need to replicate the HMC or full screen interfaces?
- Ability to set up customized text alerts from the mainframe?
- Analog vs digital display?
- How important is it to be able to customize what info you are getting?
- Would you prefer a single app for a single task or an app for a suite of tasks?
- What security concerns are most important to you?

Questions or Comments?

Thank You