

# An Introduction to Mobile Learning (mLearning)

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**Technologies, Inc.**

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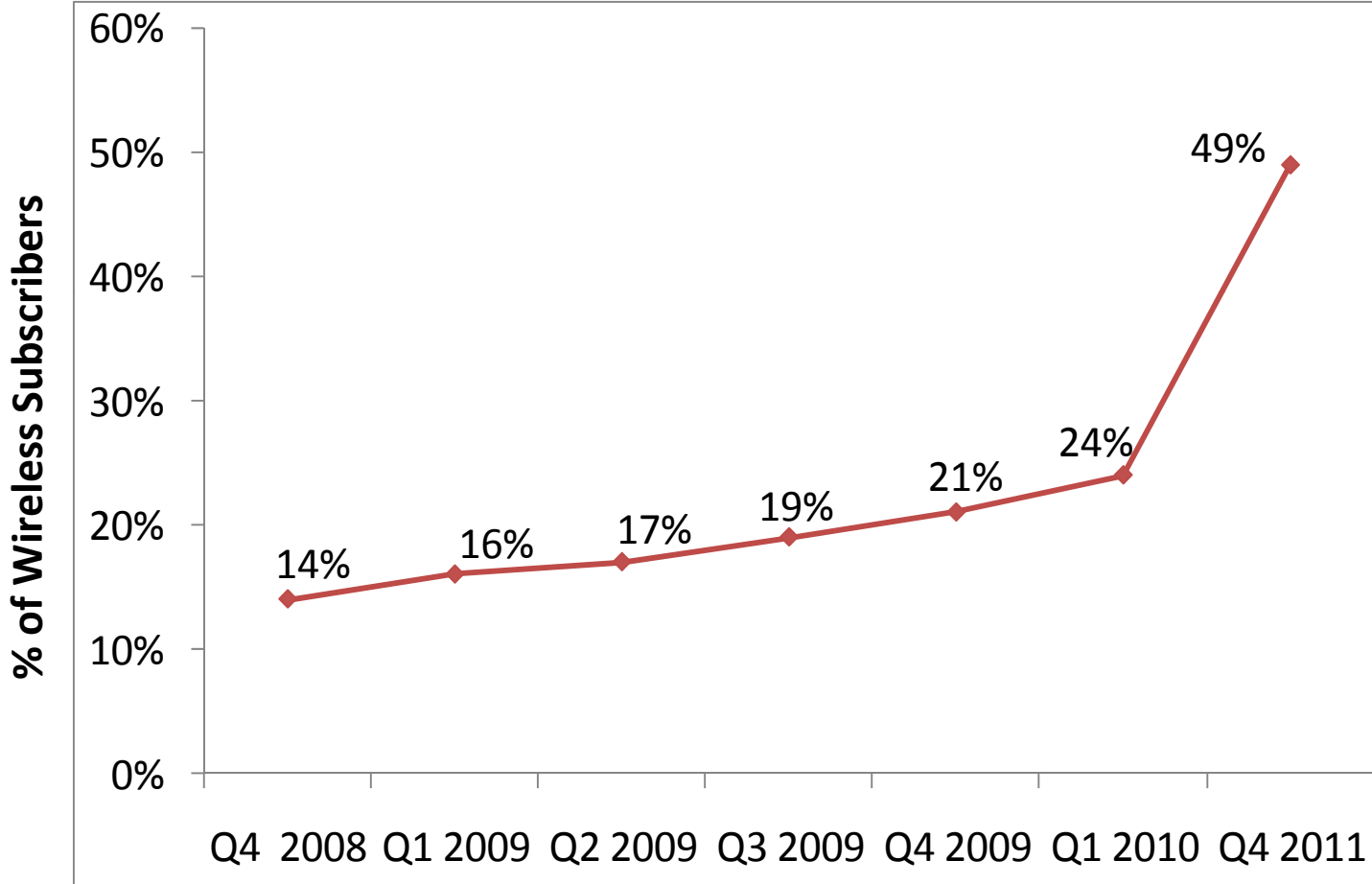
A close-up photograph of a woman with dark hair and red-rimmed glasses, smiling broadly while holding a black flip phone to her ear. Her right hand is near her chin, and her left hand holds the phone. The background is a soft, out-of-focus grey.

92%

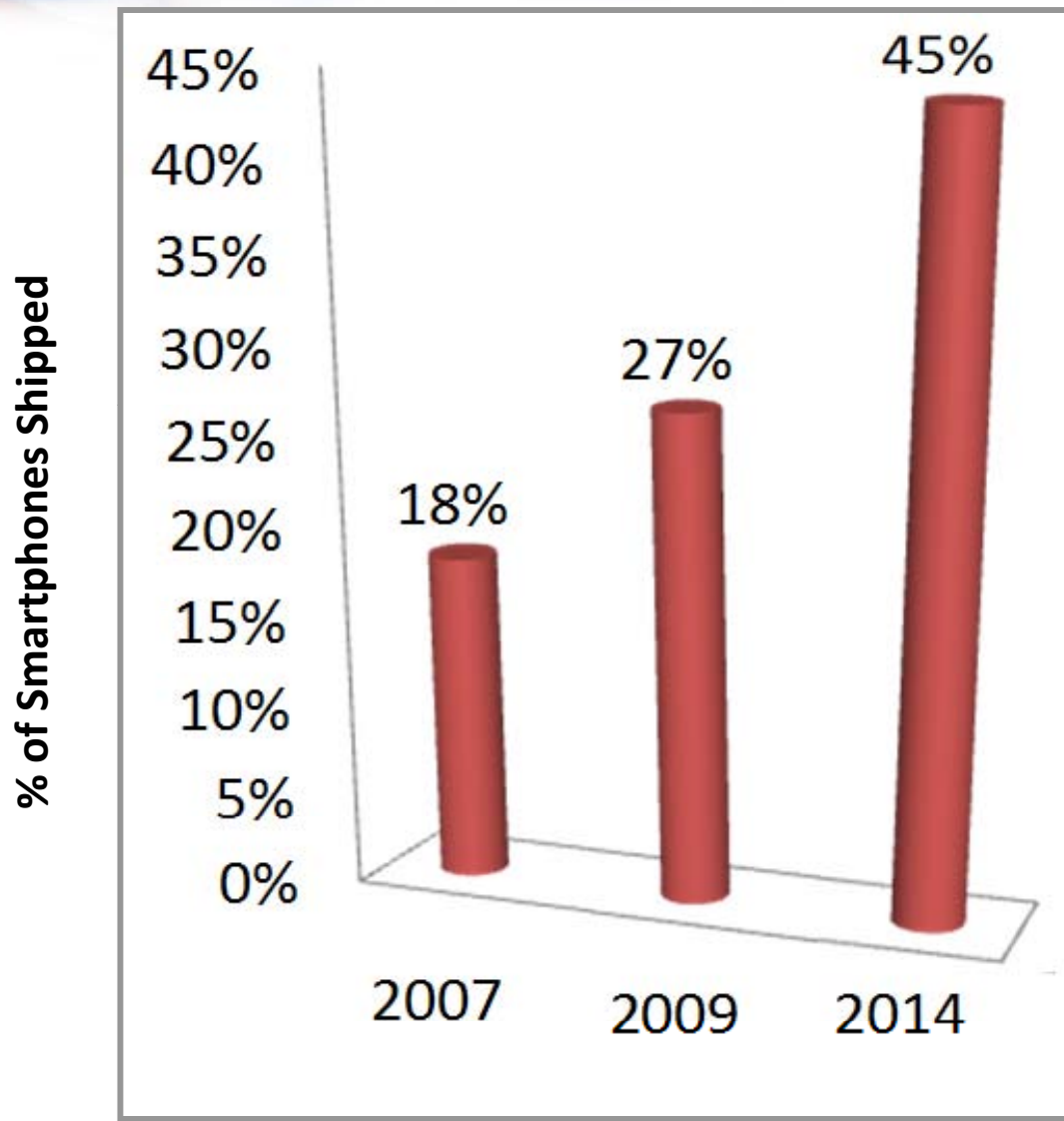
of employed  
Americans own  
a cell phone

Source: <http://maristpoll.marist.edu/612-cell-phone-nation/>

# U.S. Smartphone Ownership



# U.S. Smartphone Costs (under \$200)



# Presentation Agenda



- Introduction to mLearning
- Mobile Device Platforms
- mLearning Demonstrations, Examples, and Applications
- Getting Started



# Introduction to mLearning

# mLearning



Any learning that happens when the learner is not in a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies.



PDA



Smartphone



Game Consoles



Cell Phones



Laptops/Mini Notebooks



Tablet PCs



Mp3/Media Players

# What is a Smartphone?



- Mobile phone with advanced capabilities, often with PC-like functionality
- No industry standard definition
- Features may include:
  - Wi-fi
  - Web browser
  - GPS
  - Music player





# Learning Theory



TECHNOLOGY



INSTRUCTION



LEARNING  
THEORY



# Characteristics



# Mobile Technology



What are the capabilities and technologies that make mLearning possible?

- Text Message/Controls
- Mobile Internet
- Image/Video/Audio
- GPS/Compass



# Application of mLearning



- Training Courses
- Surveys
- Testing
- Communications/Reminders
- Performance Support



# Share and Learn



- What is your agency doing in mLearning?





# Mobile Device Platforms

# Standard Mobile Device Platforms



# Blackberry



- Widely used in Federal government
  - Highest U.S. market share in Q4 2009
  - Flash available Q3 2010
- Inferior native user interface elements



# iPhone



- Intuitive interface
- 40+ million units, plus 20+ million iPod Touch

- AppStore approval process
- AT&T exclusive carrier
- Inability to support multitasking
- No Flash support

# Windows Mobile



- Windows familiarity and integration
- Multiple devices



- Generally viewed as outdated
- Small market share

# Android



- JAVA development
- Prevalent on multiple devices and carriers
- Flash available Q3 2010
- Minimal control of apps

- Fragmentation across devices
- Minimal control of apps

# Mobile Web Applications



- Device-independent
- Less-costly
- Simple deployment



- Online-only access
- Interface design
- Unique behavior of mobile browsers



# **mLearning: Demonstrations, Examples, and Applications**

# Examples of Mobile Learning



Apple iPhone/iPod/iPad



# Examples of Mobile Learning



## Blackberry

- 2007 Pilot Program
- Offered 3 compliance program via BlackBerry for a 2-month period to a select group of learners
- SCORM compliant, integrated with MLU LMS
- Results:
  - 61% of the eligible population participated
  - 56% active users were at the executive level
  - 1.21% increase in average competency score
  - 12% higher completion rate at the 45-day milestone
  - Average 45% less time to completion



# Examples of Mobile Learning



Blackberry

gFlashPro Flashcards





# Examples of Mobile Learning



Android

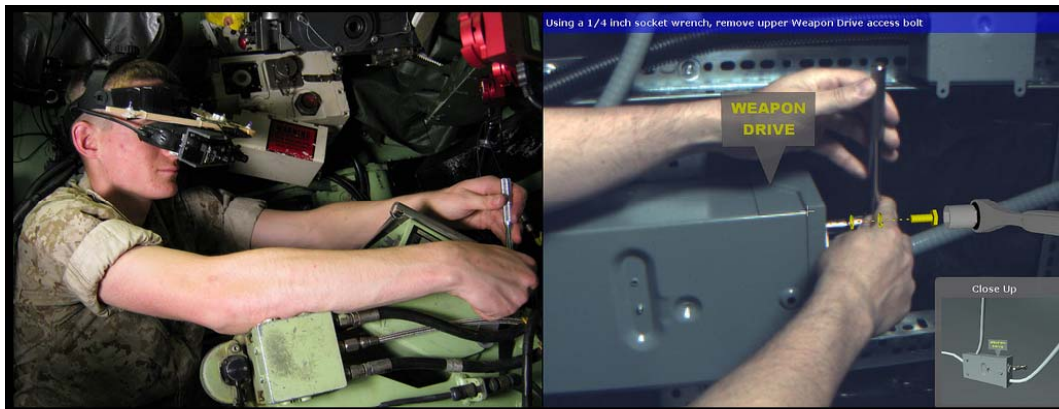


# Examples of Mobile Learning



Android

Augmented Reality for  
Maintenance and Repair  
(ARMAR)



# Examples of Mobile Learning



Android



# Additional Technology Examples



Android



qik



# Federal Government



- National Institute of Justice – Training and Assessment
- U.S. Army – Army Excellence in Leadership (AXL)
- Defense Medical Readiness Training Institute - Medical Reference Guides
- Centers for Disease Control and Prevention - Emergency Medical First Responder Mobile Guide
- National Advanced Fire and Resource Institute - Mobile Incident Response Pocket Guide
- U.S. Army – Vcommunicator Mobile Application
- Utah.gov App
- Defense Ammunition Center—Munitions Encyclopedia



# Getting Started

# Content Development



- Screen size
- Content relevance
- Content reuse
- Development tools



# Accessibility



- **Blackberry:** Visual and audible notifications, confirmation tones, Voice dialing, tactile keyboard, predictive text
- **Android:** Text-to-Speech, Speech-to-Text, Screen Reader, App add-ons (Eyes-Free), Voice Control
- **Apple:** VoiceOver, Zoom, Voice Control, White on Black, Speech to Text



# Content Deployment



- Devices
- Cost for learner
- Delivering content



# Development/Deployment Costs



- **Do-it-Yourself Applications**

- \$20-500 initial set-up fee
- \$10-50 subscription

- **Customized Application Development**

- \$1,000 - \$50,000 per application (depending on complexity)

- **Web-based Solutions**

- Cost variable, depending on complexity

- **Deployment of Enterprise System Mobile LMS**

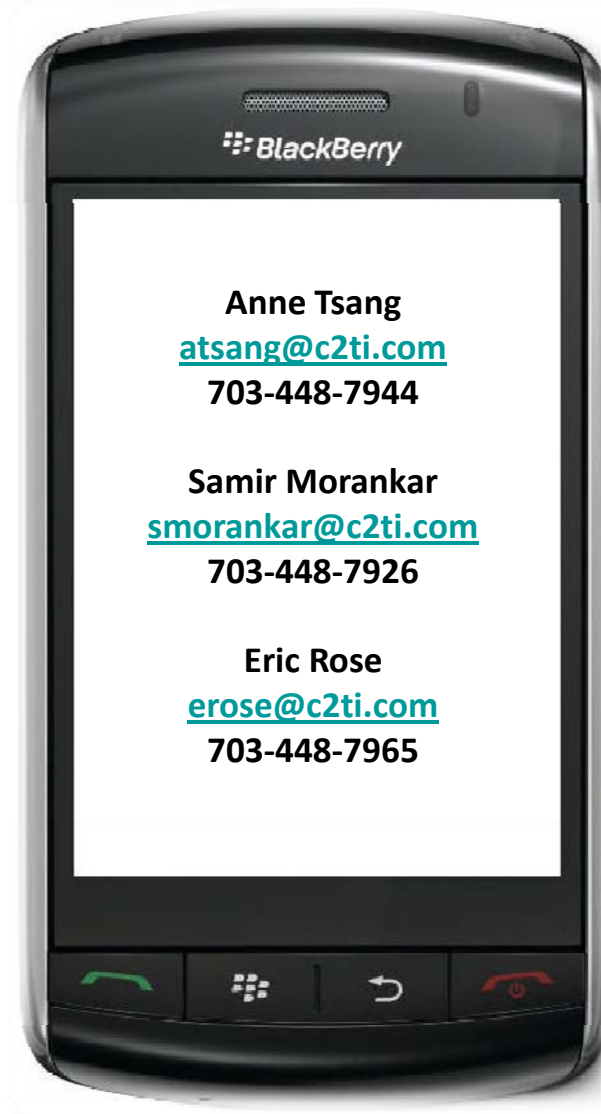
- Variable, e.g. \$30,000 for OnPoint LMS

# Questions





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