IPRO 312: Widget Applications to Enhance the Tru2Way Consumer Experience

Sponsored by Comcast
Applications on Open Platform
Memory Error!

A fatal exception 0E has occurred at 0028:C0011E36 in VXDI UMM(01) + 00010E36. The current application will be terminated.

* Press any key to terminate the current application.
* Press CTRL+ALT+DEL again to restart your computer. You will lose any unsaved information in all applications.

Press any key to continue _
Software Development Cycle

1. Initial Project Plan
2. Planning
3. User Requirements
4. Analysis & Design
5. Test
6. Evaluation
Metrics

Memory Usage vs Application Intensity (Tweets)

Memory Used vs Concurrent Instances Running

Supported Application Intensity (Tweets) vs System Memory

Max Supported Concurrent Widgets vs System Memory
Software Development Kit/SDK
Project Goals

– Primary Goals
  • Identify Metrics to collect
  • Develop Test Widget
  • Test Plan
    – Collect test data

– Secondary Goals
  • New Widget Application Ideas
  • Consumer Usability
Identify test metrics

- Bandwidth
- Memory
- Multitasking
Test Plan

Phase I
• Test robustness of sample widget

Phase II
• Stress test, sample widget
  • Determining breaking points

Phase III
• Concurrency/Multitasking test

Phase IV
• Combination of all tests
Develop new widget ideas

Use sample Google map application as a reference to develop a package tracking application.
• Programming
• Usability & Testing
• Usability concerns — lack of sufficient technical documentation.
• Emulator restrictions—limited error-checking.
Achievements

- Identified Metrics to Collect
- Developed Test Plan to measure metrics
- Procured adequate SDK
- Developed Test Applications (Twitter Client + App Manager)
- Ran tests and collected metric data
Max Supported Concurrent Widgets vs System Memory

- 512 MB
- 256 MB
- 128 MB

Max Concurrent Widgets
Recommendations / Conclusion

• Include at least 256MB of memory on every device that will run the Tru2Way platform.
• Limit the total number of simultaneous applications that a user can run to 32 or less.