**General Updates**

**Comprehensive applications:**

* -Adjusted timers on measurements to match well defined start/stop indicators
* -Removed constant time from measured operations
  + Constant time pauses for UI navigation remain
* -Created and assigned OPIDs to each measurement
  + There are 107 total measurements
  + Each application has an OPID series
  + OPIDs are sequential, and logged in the order they run
* Enhanced and improved logging
  + Measurements are logged to a .csv file with timestamp, OPID, application measured, and measurement run time
  + Event logging is now more verbose
* Basic error handling has been added
  + If an application encounters an error, the event is logged and CPSMark run is halted

**Remaining work:**

* Examine Excel OPID 31300
  + Make data set more realistic
  + Implement calculation in VBA macro inside the Excel application.
* Examine Chrome OPIDs 20110, 20120, and 20130
  + Separate opening Chrome application from the web page load.
* Improve general robustness on slower systems
* Gracefully exit applications
  + Photoshop and Word sometimes fail and get into unrecoverable state.
* UI improvements
  + Add text field for user to input a project name
  + Add ability to specify more than one run of CPSmark
* Error handling
  + Add error numbers at each potential failure point in the code
  + Map error numbers to a brief text description
  + Log error number and text description to log file, exit CPSmark
* Clean up unused code
* Move constant string references to files names to a resource DLL

**Known issues**

* AutoSetup
  + Disabled for this beta
  + Feature installs applications correctly, but fails to set up Outlook in our testing
  + Add UI indicator when application installation and set up is complete
* Data integrity
  + If data set fails MD5 check, it gets deleted, but not restored from the archive, so the run will halt.