

EXHIBIT 13

Google™ IO

EXHIBIT 462
WIT: Vandelle
DATE: 9/27/11
J. SHEPHERD

Dalvik Interpreter

- Dalvik programs consist of byte code, processed by a host-specific interpreter
 - Highly-tuned, very fast interpreter (2x similar)
 - Typically less than 1/3rd of time spent in the interpreter
 - OS and performance-critical library code natively compiled
 - Good enough for most applications
- Performance a problem for compute-intensive applications
 - Partial solution was the release of the Android Native Development Kit, which allows Dalvik applications to call out to statically-compiled methods
- Other part of the solution is a Just-In-Time Compiler
 - Translates byte code to optimized native code at run time