Intel manager gives Android poor grades on multi-core

June 11 2012, by Nancy Owano

(Phys.org) -- An Intel manager and engineer thinks anything more complex than single cores for smartphones are a waste. Mike Bell, general manager of Intel's Mobile and Communications Group, said the dual-core and quad-core processors that are featured in many handsets are not necessary for performance. He also maintains that Android is not ready for multi-core processors, and that Android's technology features do not yet make good use of dual core processors. His overall message clearly indicated that he believes having more than one core on smartphones may be a waste and that Android smartphone makers launched smartphones with dual core processors before the Android

operating system was actually capable of supporting a second core.

His comments were expressed in an interview conducted last week with [The Inquirer](#), in which he talked about disappointing findings as regards Android not making "as effective use of multiple cores as it could."

Intel looked into the level of multiprocessing support in Android via internal testing and discovered deficiencies including poorly optimized thread schedulers and inefficient data structures. Bell said Intel data suggested Android's thread-scheduling is not up to handling multi-core processors. If an operating system poorly implements threading technology, then no gains are realized He said in some instances the multiple-core design was even detrimental to overall performance. He added that in internal testing of Android handsets, results showed that chips with multiple cores at times ran slower than single-core implementations.

Bell expressed these thoughts in the interview without citing any particular smartphone but said that "If you take a look a lot of handsets on the market, when you turn on the second core or having the second core there [on die], the [current] leakage is high enough and their power threshold is low enough because of the size of the case that it isn't entirely clear you get much of a benefit to turning the second core on."

Bell also thinks that SoC vendors could be doing more to improve on Android's optimization for multi-core processors.

The thought has not been lost on technology blogs reporting on Bell's statement that Bell is with Intel and Intel's rival is ARM. In many smartphones as well as tablets, [Android](#) is powered by ARM [processors](#). Nonetheless, [Intel](#) is not alone in making such statements. Nokia CEO Stephen Elop recently claimed that dual- and quad-core chips used in modern smartphones were a waste of battery. "You don't need a quad-

core phone unless you want to keep your hands warm in your pocket."

© 2012 Phys.Org