

## PSI sends first plug-compatible mainframe out for testing

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### Event Summary

- Systems house Platform Solutions, run by a team of ex-Amdahl engineers, has shipped its first plug-compatible mainframe to initial test customer LL Bean. It claims to be involved with several Fortune 100 customers as its beta process progresses.
- PSI has set itself the difficult task of implementing the 1200+ instructions from the z/OS and S/390 instruction set on Intel's Itanium architecture. The main advantage is that it can also run Windows and Linux natively on the same machine.
- Now that Intel has given up its wider aspirations for Itanium and is pitching it directly against IBM's Power architecture, PSI could find itself a key player in the battle between the two. But PSI still hopes it might do some business with IBM.

### The 451 take

With Intel now admitting that Itanium is a high-end-only RISC replacement chip, its prospects for survival appear somewhat improved, albeit on a more limited scale. Estimates value Itanium system sales last year at around \$1.5bn, while Power and Sparc system sales were both hovering around the \$7bn mark. At its recent Developer Forum, Intel also set out a long-term Itanium roadmap, detailing future chips code-named Montecito (dual-core) for later this year, and further out Millington (dual-core, low-voltage), Montvale, Tukwila, Dimona and Poulson. PSI has the interesting possibility of licensing its technology to IBM, but the more likely route is that Intel will offer its support as part of the escalating battle against Big Blue.

## Details

Now that it's shipped its first plug-compatible mainframe to an initial test customer (retailer **LL Bean**), two-year-old systems company **Platform Solutions Inc** is talking in a little more detail about its first product, the PSI Universal Server P5210. According to PSI, it's not the chip or the underlying hardware that's the key to mainframe compatibility, but the execution of more than 1200 instructions that make up the z/OS and S/390 instruction set through its microcode engine. It has gone for operating system and application independence from the hardware platform, which is Itanium-based. PSI won't admit to being a startup, because it's taken out perpetual licenses to a lot of mature technology originally developed at **Amdahl** (now **Fujitsu**), which like the rest of the original PCM players exited the proprietary market when **IBM** introduced the zSeries of mainframes in 2000.

The P5210 supports just-in-time instruction set execution on top of a commercial chipset, an I/O subsystem supporting both legacy (ESCON) and open (fiber channel, SCSI) I/O, and middleware for handling such things as job scheduling and keeping the correct application state information in place. Instruction distribution is key, since only 10% of the instructions account for 80% of those actually executed. Up to 128 Itanium CPU engines can be supported, with access to up to 1TB of memory.

## Competitive landscape

IBM's competitive battle with **Intel** is something that could have a major effect on PSI's business. IBM has scaled down its investments in Itanium as it scales up its efforts to promote Power as an industry standard through the formation of Power.org and its 'Cell' collaboration with **Sony**. Meanwhile IBM is enthusiastically pushing its x3 'Hurricane' chipsets for Intel's Xeon line, aimed at scaling up Xeon for use in multiprocessor servers – something that could further undermine the use of Itanium. PSI maintains that IBM hasn't gone as far as it should have toward getting z/OS to run on standard Power-based systems, even though that's its long-term goal. One way to speed things up, says PSI, would be for IBM to license its technology, but the feeling is that IBM won't go to an external source for such a thing. PSI says other IBM mainframe emulation firms such as **Fundamental Software** can't be regarded as full systems companies.

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