



NEW MAINFRAME, THE Z890, TO COMMEMORATE THE 40TH BIRTHDAY OF MAINFRAMES

On April 7th, 2004 IBM mainframes turned 40 and another generation came to be.

**by Anura Gurugé,
Editor at Large**

It was on April 7th, 1964 [which was a Tuesday, per IBM's long held tradition where all important announcements were always made on a Tuesday], that IBM formally unveiled the System/360 – which turned out to be the 1st generation of the still rampant IBM mainframes.

Though we refer to the underlying architecture [anchored by such key concepts as PSW, 'BAL' instruction set and SIO] of today's mainframes as being 'S/370' – the S/370 was but a S/360 with VS. So April 7th marks a significant and unprecedented milestone. No other hardware system, to my knowledge, has enjoyed such longevity and continuing commercial success. As far as I can see only Fortran and COBOL appear to have a longer history.

IBM's April 7th, 1964 announcement, which can be found in IBM's archives starts off with:

"A new generation of electronic computing equipment was introduced today by International Business Machines Corporation.

IBM Board Chairman Thomas J. Watson Jr. called the event the most important product announcement in the company's history.



System/360 Model 30: One of the mainframe models introduced in 1964.

From IBM's archives.

The new equipment is known as the IBM System/360."

FAST FORWARD 40 YEARS

To commemorate the 40th birthday of its mainframe family, IBM, on April 6th, announced a new z890 mainframe, further extended the z990 family, and introduced a new type of processor [à la the Integrated Facility for Linux (IFL)] for accelerating Java application processing.

The highlights of this announcement are as follows:

1. new z890 mainframe: only one model [i.e. A04] but with 28 capacity settings that overlaps



the z800 at both the low- and high-ends

2. z990 enhancements: the 1,024 channels capacity (up from 512), split across 4 Logical Channel Subsystems (LCSSs), that was promised in May 2003 when the z990 was unveiled [but the LPAR limit that was going to be upped to 60 is still at 30]
3. new zSeries Application Assist Processor (zAAP): analogous to the IFL but in this case targeted at Java applications running under z/OS
4. OSA-Integrated Console Controller (OSA-ICC): system consoles for z990s and z890s running z/OS V1.3(+), z/VM V4.4(+), VSE/ESA V2.6(+), or TPF 4.1(+) can now be in the form of PCs with tn3270(E) emulation that are Ethernet (fast or Giga) attached to an OSA-Express

The z890 uses a 5 processor, multi-chip module (MCM) similar to the one used in the z800 machines that were announced in February 2002.

As with the z800s, one of the processors on a z890 is always activated, as part of the standard build, as a System Assist Processor (SAP) to expedite system management related functions, in particular I/O. The other 4 processors can be configured as business CPUs [a.k.a. CPs], zAAPs, IFLs, or Internal Coupling Facility (ICFs) processors for Parallel Sysplex operation. Thus, as with the z800s, the z890 can be configured from 1-way

to 4-way, depending on the number of CPs activated at any one time. With the 1-way and 2-way configurations, the number of zAAPs configured cannot, however, exceed the number of activated CPs. True to IBM's capacity on-demand promise, the processor capacity on the z890 can be upgraded, on-the-fly, on a temporary or permanent basis.

Microsoft's much publicized \$1.6B settlement with Sun vis-à-vis Java, on Friday, April 2, ironically, takes some gloss away from the zAAP! Though the Sun-Microsoft agreement had to do with Microsoft's hitherto debasement of Java, what came across last week, a few days prior to this IBM announcement, was the notion of Sun and Microsoft collaborating to minimize the spread of Linux. IBM is very committed to, and heavily invested in, both Linux and Java. Java is Sun's baby. Microsoft, despite the \$1.6B agreement, has no love for Java. Java, like Linux, is a major competitive threat. Will Microsoft coerce Sun to downplay Java in the interest of jointly fighting Linux?

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