AccessionIndex: TCD-SCSS-T.20121208.068
Accession Date: 8-Dec-2012
Accession By: Dr.Brian Coghlan
Object name: IBM AS/400
Vintage: c.1988
Synopsis: IBM's successor to the System32/34/38 but without capability addressing.
S/N: 24174.

Description:
This IBM Application System 400 was developed as project *Silver Lake*, after the lake in Rochester, Minnesota, near where it was developed. It was introduced in 1988 as the *AS/400* with a 48-bit CISC CPU, but in 1995 re-engineered with 64-bit PowerPC RISC CPU, and eventually renamed to the *eServer iSeries* in 2000, and then *System i* in 2006. It was marketed as a general business machine, a successor to the System/38, but also backwardly compatible with the source code for System/34 and System/36 machines. The AS/400 was mostly a superset of the System/38 object-oriented architecture, the primary addition being a DB2 relational database; the *DB2/400* RDBMS and also the UNIX-like *Integrated File System* were integral parts of its *OS/400* object-oriented, menu-driven multi-user operating system.

As per the System/38, the AS/400 hardware was based on a custom 48-bit processor, with a 48-bit address space and future-proof 128-bit pointers, but sadly unlike the System/38, without capability addressing. The lowest-level processor architecture was called the *Internal Micro Programmed Interface* (IMPI), with an instruction set similar to the IBM 370. Much of the system code was in microcode. At a higher-level the processor executed a virtual *Technology Independent Machine Interface* (TIMI) instruction set. At this level everything in the OS/400 was an atomic object with persistence and garbage collection. Objects communicated via per-object message queues. However, there was only limited inheritance and polymorphism. TIMI enabled binary-compatibility over disparate processors, analogous to that of the Java JVM. Programs were compiled to intermediate code, but instead of being interpreted they were translated to machine code for the executing processor. Program object code included both the TIMI and machine code, so they could be re-translated at will.

Accession Index	Object with Identification
TCD-SCSS-T.20121208.068.01	IBM AS/400 Chassis. Manufacturing Label 1: PN92X6611EC0844678SN030752 Manufacturing Label 3: Machine Type No: 9402, Release Level: 3.0, S/N: 24174, PTF Level: C0278130 Manufacturing Label 5: 62940424174
TCD-SCSS-T.20121208.068.02	IBM AS/400 ??? plugin module (in slot 2).
TCD-SCSS-T.20121208.068.03	IBM AS/400 ??? plugin module (in slot 3).
TCD-SCSS-T.20121208.068.04	IBM AS/400 ??? plugin module (in slot 4).

Note: There is some confusion as the logo says AS/400 9404, and the manufacturing label 5 includes the numbers '9404', but the manufacturing label 3 says Type 9402. It is not known if these are in contradiction.

Figure 1: IBM AS/400 front three-quarter view

Figure 2: IBM AS/400 front panel closeup

Figure 3: IBM AS/400 front panel closeup

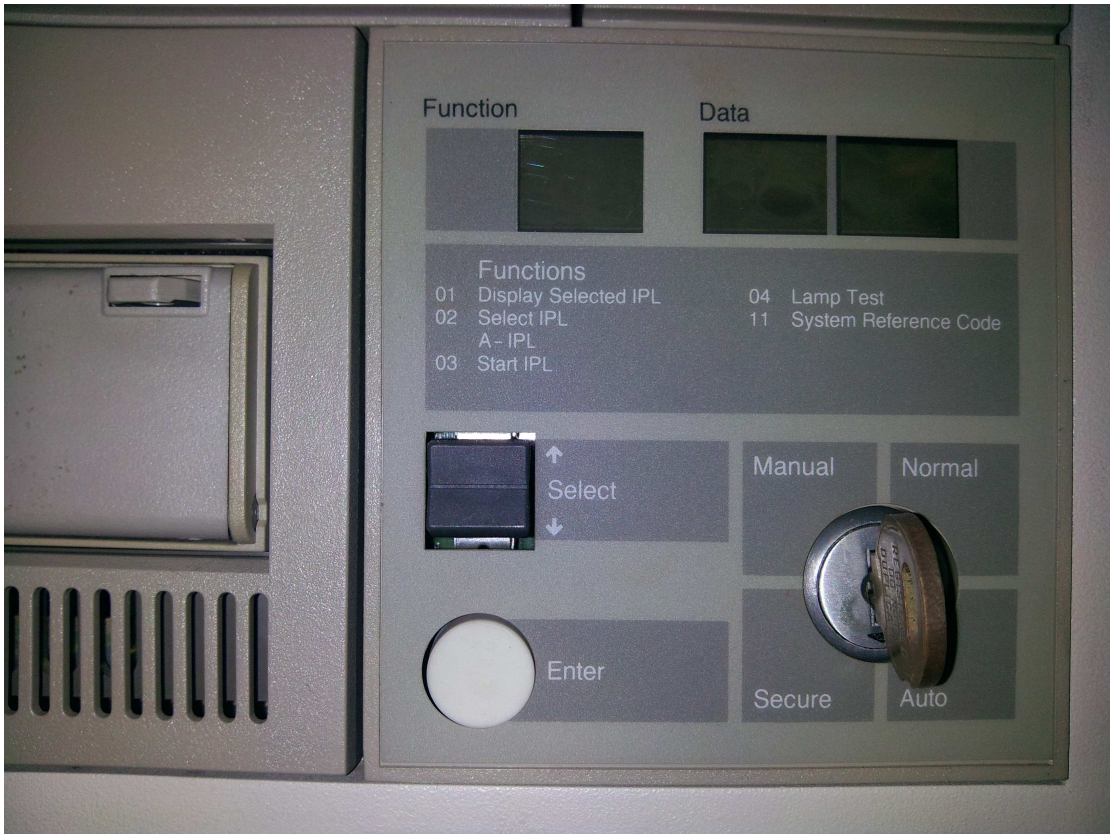

Figure 4: IBM AS/400 front panel closeup

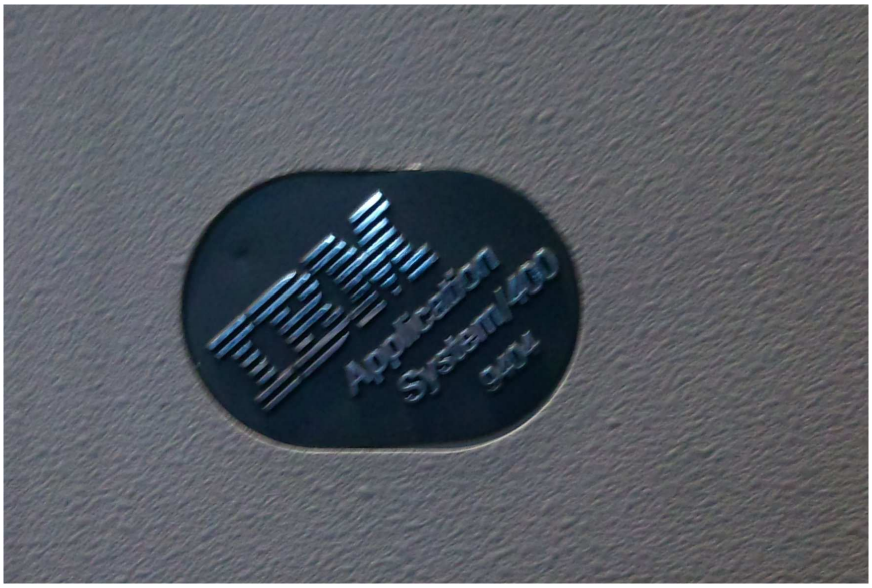

Figure 5: IBM AS/400 logo
IBM Application System/400 9404

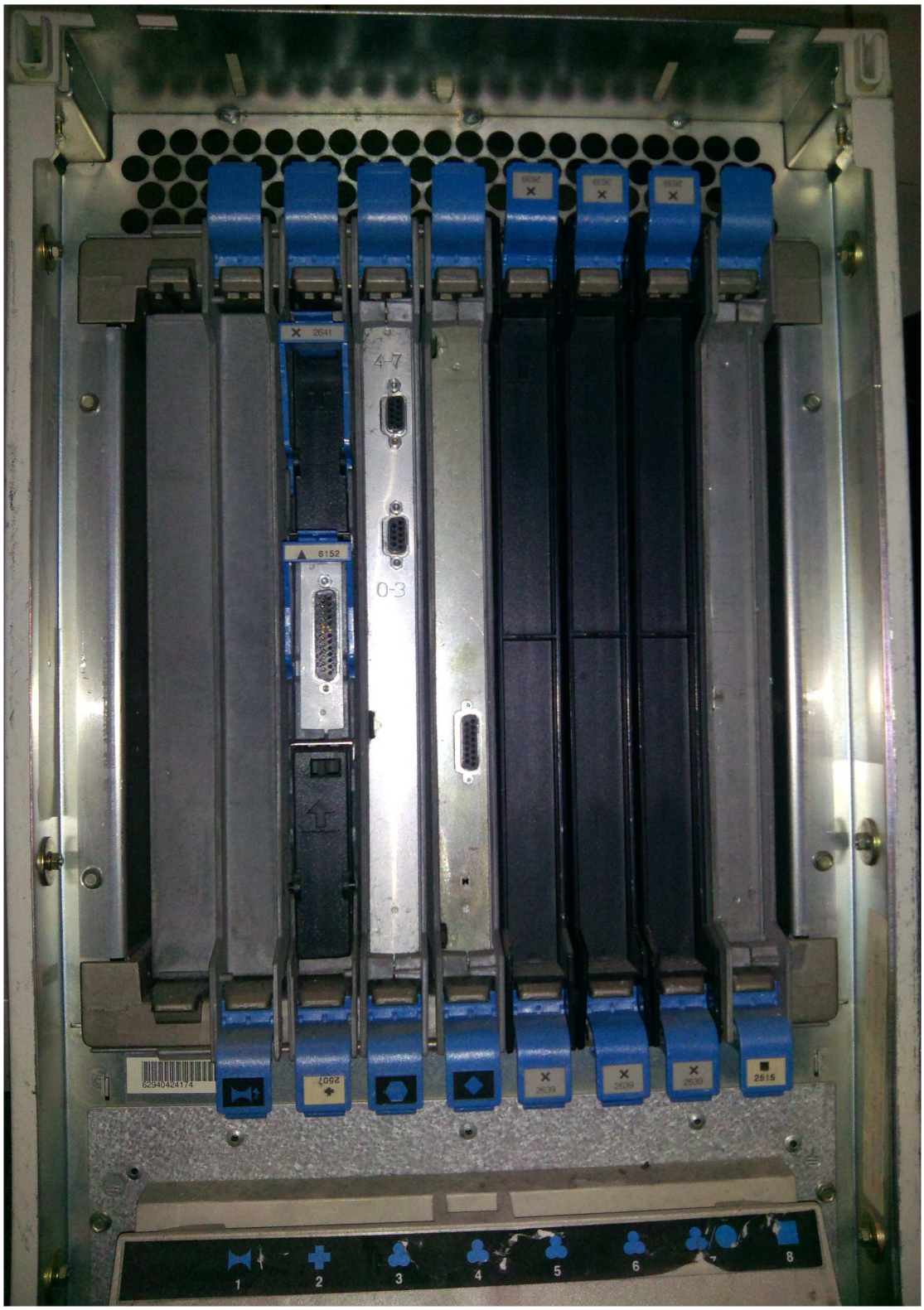

Figure 6: IBM AS/400 rear view

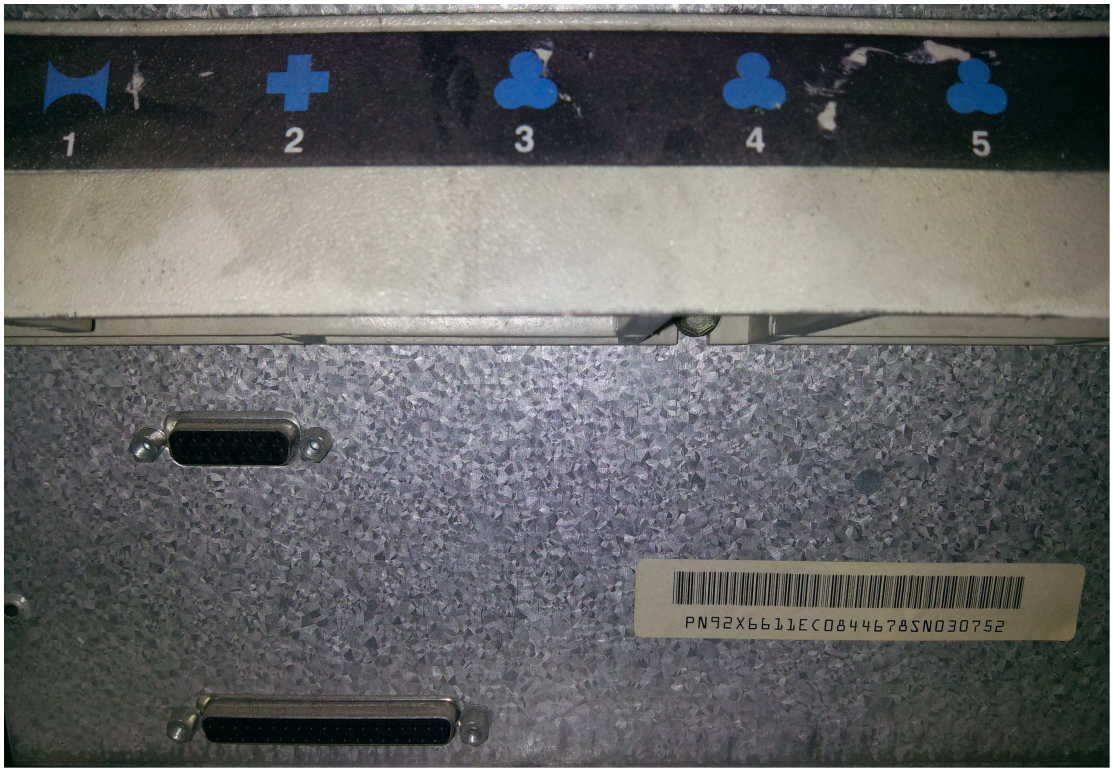

Figure 7: IBM AS/400 Manufacturing Label 1: *PN92X6611EC0844678SN030752*

Figure 8: IBM AS/400 rear right manufacturing label 2

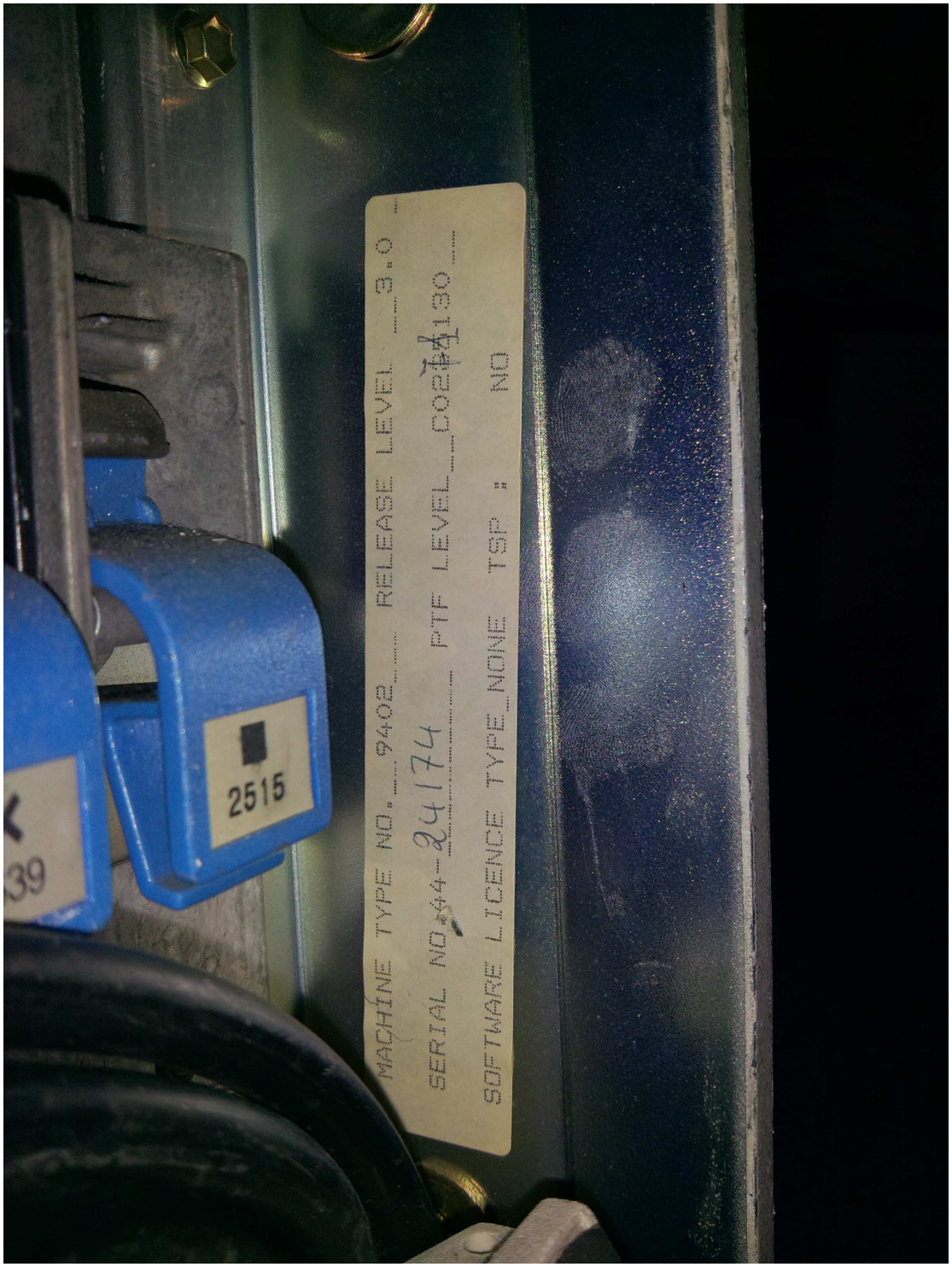

Figure 9: IBM AS/400 manufacturing label 3
Machine Type No: 9402
Release Level: 3.0
S/N: 24174
PTF Level: C0278130

Figure 10: IBM AS/400 rear left manufacturing label 4

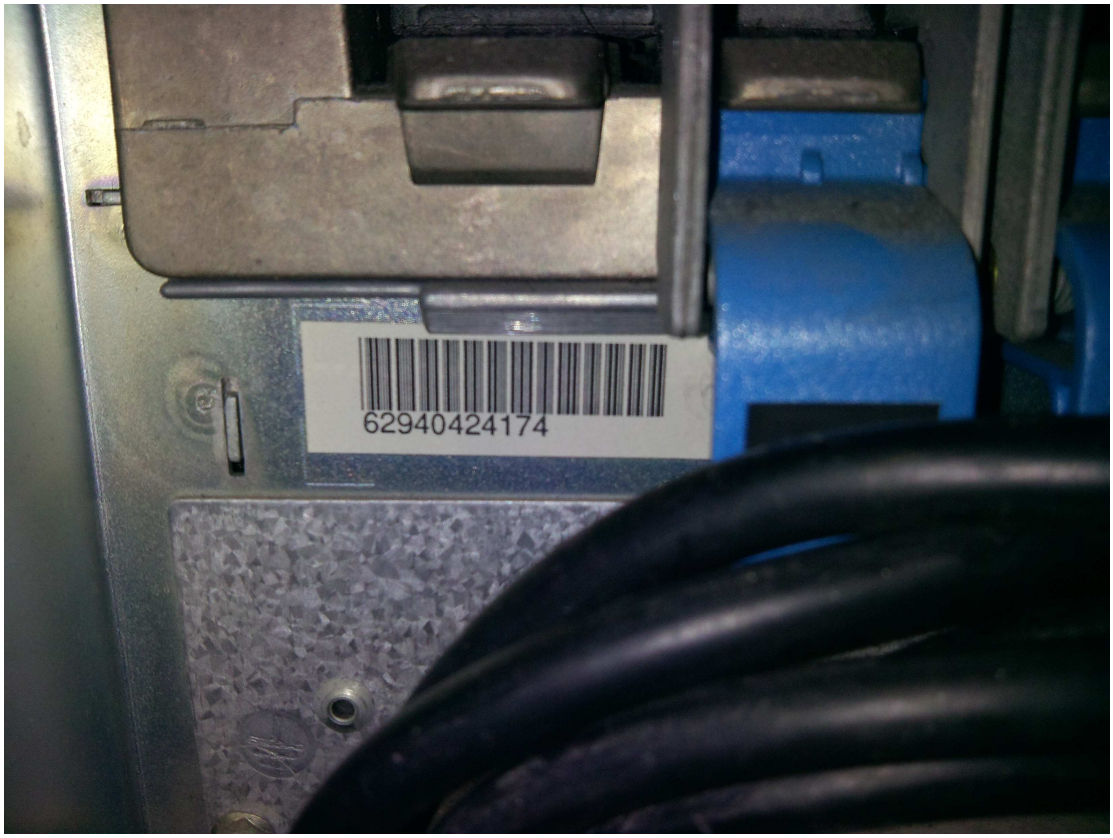

Figure 11: IBM AS/400 maufacturing label 5: 62940424174