IT-ceum - Swedish Computer History Museum
www.itceum.se
Linköping, Sweden

Note – Unfortunately my HP digital camera "lost" all the pictures I took that day. The pictures here are courtesy of Peter Blom of IT-ceum (tack så mycket Peter!) and the web.

I've been traveling to Finland and Sweden a fair amount for work this year, and Dag had told me that we had loaned some artifacts to a computer museum in Sweden. A couple weeks ago I had a free weekend and having my last meeting in Lund, decided to take the train to Linköping and spend Saturday at IT-ceum, the Swedish computer history museum, before proceeding on to Stockholm.

The IT-ceum computer history museum in Linköping Sweden, focuses primarily on the development of computing technology in Sweden.

Linköping has a hi-technology R&D campus, Mjärdevi Science Park, next to Linköping University, similar to Stanford Industrial Park. IT-ceum is located in a ground floor corner space in a 10-15(?) story office building with curving stylishly black architecture. The ground floor of the building houses a cafeteria and several other businesses with a large open atrium.

In the atrium area there is a large Bryant fixed head disk drive from the early 1960s that was once connected to a DataSaab(?) mainframe system. At the entrance to the Museum is a Cray-1 from Saab (Aerospace?) that was used for aircraft design and metallurgy studies. Signage on these exhibits has detailed history and descriptions in Swedish, with a shorter summary in English below. *Would be interesting to ask ourselves what would be the cost/benefit of providing multi-lingual signage on artifacts, what languages would be appropriate (asian? European?), and if we not alternatives for providing foreign language descriptions of exhibits and artifacts?*

Entrance Exhibits

The layout and exhibits in the Museum has a nice flow from when a visitor first enters the Museum. The first exhibit concerns Sweden's first computing efforts before WW-II and development of the first systems around telephone relays, rather than vacuum tubes. Sweden sent several scientists to study the Eniac, and then return to Sweden to develop computing technology.

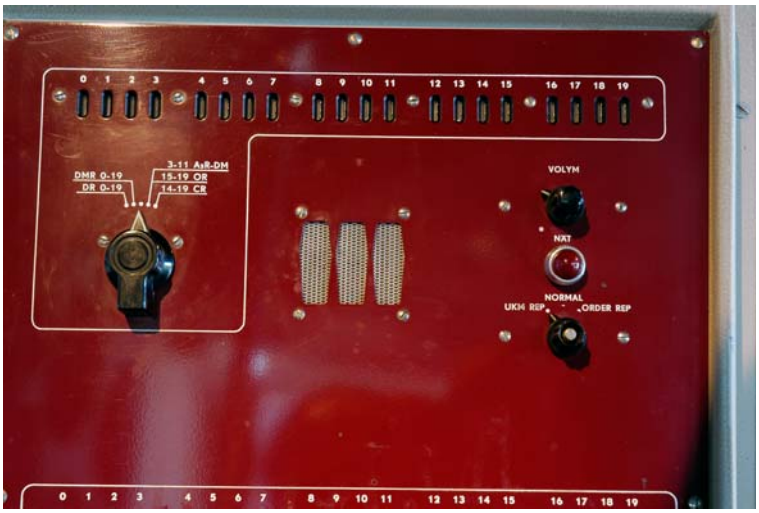
Development of a native computing industry was inadvertently motivated by the U.S. Government. In the 1950s Sweden wanted to buy systems from IBM, but in the Cold War era at the time there was concern about Sweden using these machines to develop atomic weapons. I was surprised that this was the primary reason stated by the exhibit, and not the proximity of Sweden to the Soviet Union. So there was an embargo on computing technology from the United States.

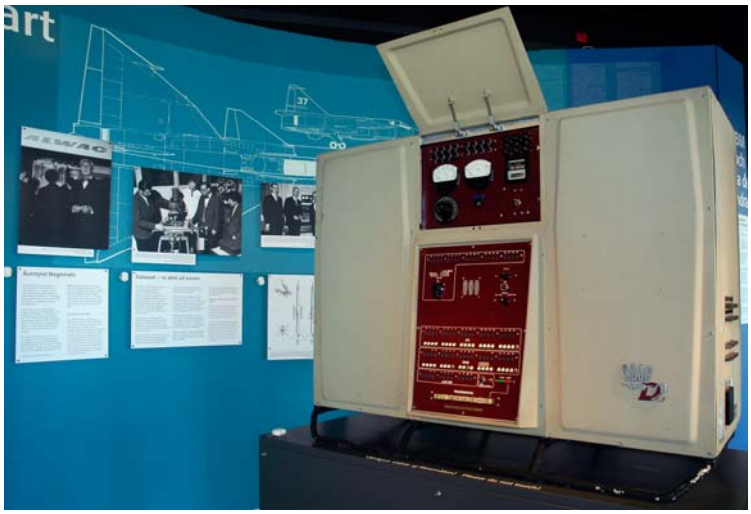
Sweden therefore had no choice but to develop their own internal computing industry. This lead to development the BESK (based on Von Neumann architecture), a transistorized machine built in the 1950s.

BESK Exhibits (Note - at the time of my visit the BESK was being replaced and not on display)

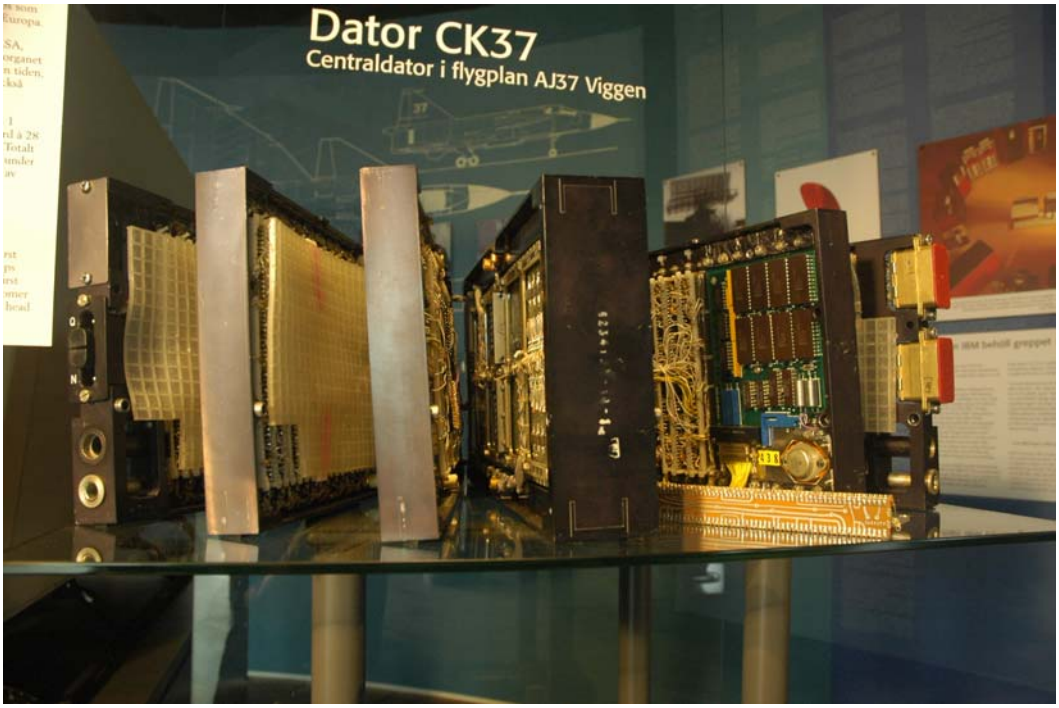
Given Sweden's excellent technology base and history of engineering innovation (e.g. by companies such as Ericsson) it is not surprising that this was an easy step to take. All the exhibits at IT-ceum did a good job placing this development in the context of the overall political and business environment of the time.

The next few exhibits at the Museum chronicle the rise of this computing industry. There is a DataSaab D2 (?) (c. early 1960s), a small transistorized machine meant as a 'desktop' system. One would need a strong desk for this PC. Anna Gustafsson, an IT-ceum staff member who showed me around, had a keen interest in computer games, and their historical development. She indicated that the DataSaab was used to develop an early computer game where one would shoot a target with a cannon, and using a voltage control knob on the front panel specify the attitude of the gun. No display on the machine other than the front panel meters, but another example of a very early computer game. This machine was in new condition – the Museum has obviously done a great job of obtaining and maintaining their artifacts in near pristine condition.





Saab D2 Minicomputer



Viggen Avionics Computer built by Saab

Another interesting technology development was the CK37, an avionics computer, developed by Saab for use in the Viggen jet. In the early 1960s (circa 1963?) this was one of the first computers to be based mostly on integrated circuits. These ICs were from Fairchild, and must have been some of the first ICs ever produced. Very nice mechanical packaging, made possible by the use of this new technology.

Two of these systems are on exhibit. One shown at left opened showing the components and a second underneath in a configuration as installed in Viggen.

The other large anchor exhibit in the museum is built around a DataSaab mainframe computer. Nice presentation, with a cut-away of the computer-room flooring showing cabling between different parts of the system.

DataSaab Mainframe Computer exhibit

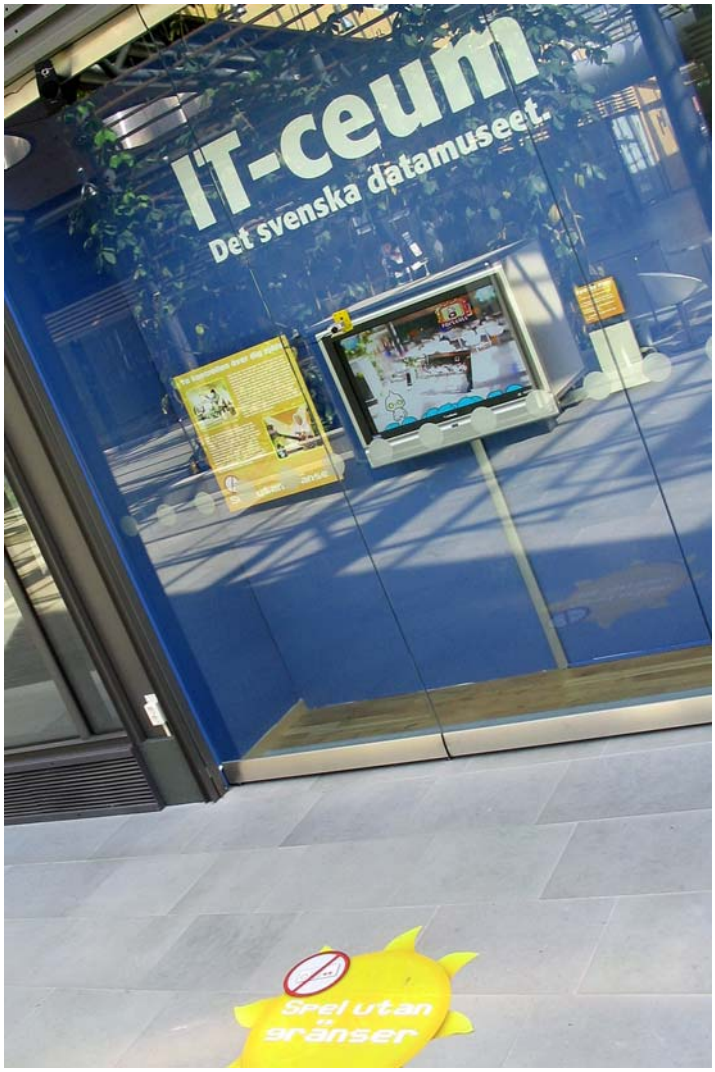
There are several other exhibits in the museum. These are around personal computers, with both foreign (U.S., British) and domestic (Swedish) machines.

A nice, although small, exhibit contrasts different programming languages. It also shows the evolution of programming languages and development of different programming paradigms (e.g. object oriented, functional). Does this with a listing of programs in different languages.

Here are some photos of other exhibits:

Lecture Area – Closeup of BESK

Floor to Ceiling Cable Structure with Embedded Displays



Back of D2 with CK37 Exhibit in foreground

IT-ceum is located in Linköping, a university town about a 1.5 hour train ride south of Stockholm, or 2.5/3 hours north of Lund/Copenhagen/Malmo. Linköping can be a day trip from Stockholm, or other locales in southern Sweden. But I spent the entire day there. Definitely worth a visit – very nice museum and one aligned with our mission.

Didn't have time to explore Linköping, but it is a very pleasant university town with many high-tech aerospace and defense companies.

Anna also indicated that IT-ceum has a restoration project in progress. The location is off-site, and (I believe) is being staffed. Would be interesting to explore co-operation between IT-ceum in this and other areas. If you should happen to be in northern Europe or Scandanavia I would highly recommend a visit.

Please feel free to call (650-704-3934) or email (lee_courtney@acm.org) with questions, coments, or if I can be of assistance.