

Events and Sightings

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CHM Eastern Europe Project and SoRuCom 2011 Conference

The Computer History Museum in Mountain View, California, sees its mission—to “preserve and present the artifacts and stories of the information age”—as one of global scope. From its founding on the East Coast to its current location in Silicon Valley, the museum has embraced the histories of its local communities and interpreted its mission in the context of computing history’s worldwide reach.

While publications like the *Annals* have done a commendable job in publishing accounts of Eastern European and especially Soviet computing history since the end of the Cold War, the need to investigate how a museum located in California can approach a more comprehensive history that includes the United States’ former Cold War opponents is evident.

Soviet and Russian Computing Contacts

CHM already had a small number of Eastern European artifacts in its collection when the decision was made for an exploratory visit to Russia in 2009. The purpose of the trip was to introduce the museum and its mission to the community of computing history participants, historians, and museums in the former Soviet Union; gain a better understanding of the current state of artifact preservation and display; and investigate the possibilities of a long-term dialog with counterparts in Russia.

Thanks to financial support by the Charles Simonyi Fund, CHM President and CEO John Hollar and I set out to visit Moscow in December 2009. Existing personal and professional contacts allowed for a full itinerary. Hollar introduced the museum and its mission to the Russian Academy and Sciences. A tour of the Moscow Polytechnic Museum showed that several key artifacts from the Soviet Union’s computing history are well preserved. A visit to the Lebedev Institute and its small museum as well as Moscow State University made clear some of the challenges these seminal institutions face today. And finally, a meeting with super-computing designer and Intel fellow Boris Babayan gave valuable insight into some of the larger narratives of Soviet computing history.

The most important outcome of the visit to Russia was that the museum was able to establish new professional ties, the kind that only in-person meetings can provide. As a result of these contacts, CHM was invited to participate in the 2011 Conference on the History of Soviet and Russian Computing (SoRuCom).

This conference was a follow-on to SoRuCom 2006, which took place in Petrozavodsk, Russia, and about which a report was published in the *Annals*. The 2011 conference took place from September 12 through 16 in Veliky Novgorod at the Yaroslav the Wise Novgorod State University and more than 100 people participated. CHM contributed financially to the organization of the conference.

The organizers planned the conference around a large array of anniversaries, most notably the 100th birthday of Alexey Lyapunov and the 80th birthday of the late Andrey Ershov. The plenary memorial session was dedicated in their honor as well as to Anatoly Kitov, who passed away in 2005.

In excess of 50 talks were scheduled, some in parallel tracks organized by these topic areas: “History of Computers,” “Programming,” “Computer Networks,” and much to my delight, “Computer Museums.” Most of the talks were participant histories by former Soviet, but primarily Russian, computing scientists and engineers—almost all talks were delivered in Russian. It quickly became apparent that this is a close-knit community that shared the difficult experience of developing and using computing technology in a Soviet state that rarely provided the material or political support necessary for technological advances. A topic that came up repeatedly, in talks as well as in hallway conversations, was the state decision to clone IBM’s System/360 over continued development of indigenous computer systems. Not surprisingly, this decision was derided by many of the conference attendees.

Several of the talks deserve mention, and the topics were unexpectedly varied. A particularly interesting presentation was given by Tamara Alexandridi, who worked on the memory section of the Russian computer M-1, the 60th anniversary of which was also celebrated at the conference. Her retelling of the early days of computing development in the Soviet Union presented a very different picture of gender roles than the ones with which Western historians have to contend.

Other talks about military computer systems, microprocessors, programming languages, operating system and networking work, original microprocessors, and computer applications in schools presented a fascinating and broad picture of an innovative and creative computing culture that, against all economic odds, seems to have had some remarkable successes.

The historical material pertaining to Soviet-era computing that is available to researchers is intricate and



Figure 1. Russian oral history project participants. From left to right, Alex Bochannek (Computer History Museum), Victor Tsvetov (former Svetlana Semiconductor engineer and executive), Rosemary Remacle (CHM), Vladimir Popov (managing director of Svetlana Semiconductor).

not always easily accessible. Some younger scholars are working on more critical analyses and several of their papers were presented at SoRuCom. Although excellent work in this area has been done in the past, very little new work is being undertaken in English on the topic. As archival materials are slowly becoming more available, it would appear that more and not less research is needed to make it available to non-Russian speakers.

The next SoRuCom conference is planned to take place at the Tupolev State Technical University in Kazan, Russia, in 2014. Kazan, incidentally, was one of the manufacturing locations for a number of computer systems.

Russian Oral Histories

One area in which CHM has been investing extensive resources is the documentation of semiconductor developments through oral histories. A large number of these interviews are recorded every year, and transcripts are available on the museum's website.

Because most of these oral histories pertain to work done in the US, a chance meeting at SoRuCom 2011 between the author and former Svetlana Semiconductor executive Victor Tsvetov presented the possibility of documenting the developments in the Soviet Union.

Longtime CHM Trustee Gardner Hendrie, who has been instrumental in many oral histories and chairs the museum's Oral History Steering Committee, spearheaded

the project. Because the interviews needed to be conducted in Russia, the museum raised additional funding from the Russian Venture Company (RVC) and the Skolkovo Foundation. Rosemary Remacle, former staff director of the museum's Semiconductor Special Interest Group and herself an industry veteran, set out to recruit the most important participants in Russia, plan the interviews, and work out the complicated logistics (see Figure 1).

Rosemary Remacle and the author spent a week in St. Petersburg and Moscow in May 2012 conducting the oral histories and meeting local experts. In addition to Victor Tsvetov, CHM has collected oral histories from Managing Director Vladimir Popov at Svetlana Semiconductor, Igor Grekhov and Nobel laureate Zhores Alferov at the Ioffe Physico-Technical Institute, Boris Babayan at Intel, President of the Russian Ministry of Electronics Alexander Shokhin, and Yury Nosov, a researcher at the Pulsar Scientific Research Institute.

The interviews provided a new understanding of the state of semiconductor research and development, manufacturing, and applications in the Soviet Union. The interviewees offered a candid view of their experiences, often spanning more than half a century, especially when reflecting on the breakup of the Soviet Union in 1991. The transition from a planned economy with great demands on development and manufacturing, particularly by the military, to a market economy proved to be dramatic to the industry.

While the interviews were successful, much more remains to be done. The highly compartmentalized nature of industry and research in the Soviet state makes it difficult to get a comprehensive view of parallel developments. This challenge is magnified when considering work done in other Eastern Bloc states like East Germany, which also had a thriving microelectronics development program. Transnational approaches as practiced by many European historians seem to offer a way to address these challenges.

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SIGCIS at SHOT Conference

This year's annual conference for the Society of History and Technology took place 4-7 October 2012 in Copenhagen, Denmark.