



A Review of APL-Berlin-2000

—by *Stephen M. Mansour*
Scranton, Pennsylvania

Sunday, August 23, 2000

I ARRIVED IN BERLIN the day before the conference and checked into the Hotel Heidelberg, accompanied by my 15-year-old son George. I was determined to enjoy this one, after having organized last year's conference in Pennsylvania.

My son and I took a bus tour of Berlin on Sunday taking in all the usual sights—Checkpoint Charlie, the Wall, the Alexanderplatz, the Brandenburg Gate and the Reichstag. The amount of construction was amazing. I had been to Berlin once before in the early 70's and had experienced Checkpoint Charlie firsthand in East Berlin—then under control of the Communists.



USA, Germany, and Russia get together at a pre-conference visit at the Café Filmbühne

We got back to the hotel about 5:00 p.m. and went to the café in front where we met Lynne Shaw and Mike Kent with his wife and daughter. It started to rain heavily, but fortunately it stopped just before 7:00 p.m., when we walked over to the Café Filmbühne nearby for a pre-conference get-together. Ray Polivka was there, as well as

Jim Brown and Garth Foster. I also ran into Alan Graham, who had come all the way from Riga, Latvia, to attend the conference. Everybody was surprised to see me; apparently the previous conference chairman does not often attend the next conference.



The registration desk



The main concourse area

Monday, August 24, 2000

The next morning, we walked over to the Technische Universität, or TU as it is known. The entrance was a modern box-shaped structure, but when we walked inside and upstairs to the registration desk, I was pleasantly surprised to see a classical courtyard surrounded by columns and a Greek statue.



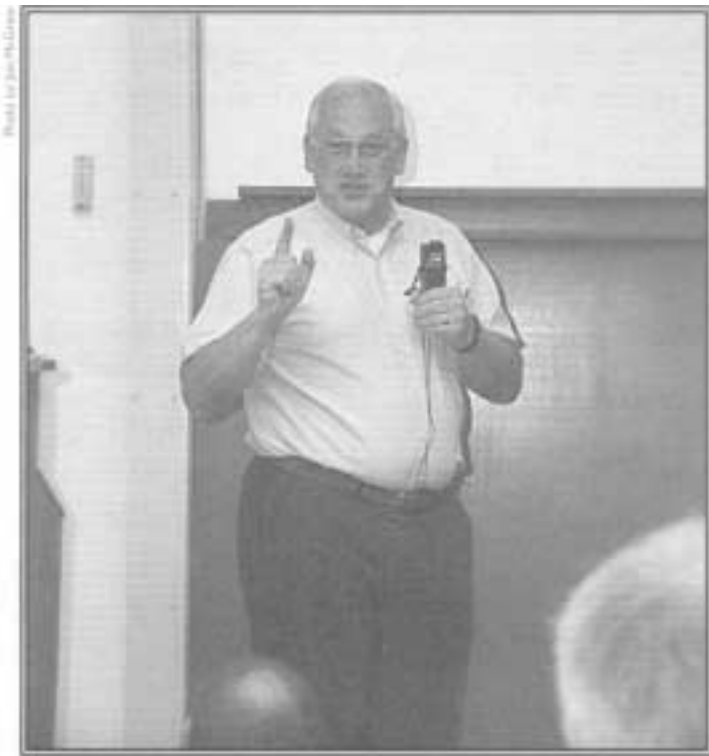
Peter-Michael Hager gives the opening plenary session

The opening plenary was given by Peter M. Hager on transforming Abstract Syntax Notation One (ASN.1), a standardized notation for data networks, into APL nested structures. Later, Martin Barghoorn discussed high-performance computing through parallel processing, using eyes, ears and hands as examples of natural parallelism. After lunch, the Soliton Vendor Forum was held, followed by an interesting talk by Jim Brown on What's Wrong with APL2. He gave a nice proof of why the enclose of a simple scalar is also a simple scalar, similar to the

proof of why $2.99999... = 3$. His final conclusion was that there was not much wrong with APL2, although he wished he had done a few things differently. Later, Timo Laurmaa discussed the pitfalls of corporate intranets, showing an APL program that deletes links to outdated files.

Tuesday, August 25, 2000

On Tuesday, there was an invited paper by Dietmar Sengenlechner on GERVA, a program that allows secure transmission of legal documents through encryption and digital signatures. We've come a long way since Alan Turing solved the riddle of the Enigma machine during World War II!



Jim Brown discusses some alternative language approaches

After the coffee break, S. H. Ehrbar gave a very interesting talk about a notation he invented for high-rank arrays. Although he has no computer background, his notation was of great interest to the APL community. An array has "arms" (one for each dimension) and "fingers" (rows, columns, planes, etc.). Examples from linear algebra included *matrix multiplication* which linked one arm to another and *transpose* which turned the symbol upside down.

Finally, R. L. Brown discussed "Interest Made Simple with Arrays using J." He showed how to handle irregular and missed payments in the calculations.

At 5:00 p.m., we convened the SIGAPL meeting. Only two elected members were at the conference, so I was drafted to conduct the meeting. Issues discussed were APL Quote Quad, in which Jon McGrew was producing five issues a year to get back on schedule. Ray Polivka mentioned translating French and German APL journal articles into English as a way to get additional material for Quote Quad. The Standards Committee decided to include all symbols of all APLs in Unicode.

That evening, the whole group went to Aschinger, an authentic German Pub, complete with band. George discovered two club rooms in the back where the Russian delegation was conducting their traditional "evening seminar."



David Liebttag describes IBM's APL2 Unicode support

The IBM Vendor Forum brought a lot of cheers from the crowd when they announced that by using APL bit-mapped characters in Unicode, one could now put APL symbols on the web or include APL symbols in documents without having to ship the fonts. Dave Liebttag demonstrated how one could enter an APL expression on the web and get a result from another site.



Some self-study in the break area

That afternoon, I attended the Dyadic Systems tutorial entitled "Driving COM and the Windows GUI from Dyalog APL Version 9." Traditionally, GUI programming is totally different than APL, but Version 9 of Dyalog has brought it a step closer by

allowing programmers to manipulate properties directly as if they were variables. They also create new system commands such as `)PROPS`, `)EVENTS` and `)METHODS`.



Peter Donnelly explains new features at the Dyadic Systems booth

Later that afternoon, John Scholes discussed Namespace References in another Dyadic tutorial. This new data type allows one to refer to namespaces directly without quotes, resulting in easier-to-read programming.



The evening river cruise on the Spree

In the evening, a boat trip on the Spree River was scheduled. We took the U-Bahn (subway) to the Museum Island in the former East Berlin where we boarded the *Heinrich Zille* for a two-hour cruise.

Wednesday, August 26, 2000

Wednesday morning began with Ian Clark's invited talk "The Killer App—How to Make Millions with APL." This interesting and entertaining talk posed such problems as: If APL enables

lone programmers to undertake projects far beyond their competence, are APL programmers competent or not? If "real men" don't program in anything but C/C++, then they don't write original software, either.

At the Dyadic Vendor Forum, Peter Donnelly announced that Dyalog APL is being integrated into the Microsoft.NET Framework and Active Server Pages+ and that Dyalog APL Version 9, recently announced, will be .NET ready. He mentioned that Bill Gates was actually forced to utter the word "APL" in his presentation at a recent conference in Orlando. The only disappointing thing about the Dyadic presentation was that there were no ducks! Apparently they had been killed off by Eric Baelen during the last conference.

In the afternoon, Dan Baronet discussed tree searches using the 8-queens problem, the knight's tour and 3-dimensional tic-tac-toe as examples. Bob Brown then gave an introduction and overview to the problem of extending APL interpreters to provide native support for object oriented APL. After that I presented my talk on "Houses, Windows and DOHR's." I must admit it's a lot easier to present a paper than run a conference!



Heading into the Spandau Castle for the evening banquet dinner

That evening, they chartered a bus to take the conference attendees to the banquet, which was held at the medieval fortress, *Zitadelle Spandau*, started back in the 12th Century. We were seated at long tables and were presented with a four-course meal while troubadours entertained us with music and bagpipes. Conrad Hoesle-Kienzlen and Nancy Wheeler were chosen as the Knight and Lady of the evening. During the banquet time, SIGAPL made their presentation, awarding the Iverson Award to Lynne C. Shaw for her long-time service to the APL community. As Chairman of last year's conference, I can attest to her efforts and dedication in making things happen for the APL community.



Medieval banquet and entertainment, underground at the Spandau Citadel



Visiting with our chef for the evening: Herr Braun and the Browns

Thursday, August 27, 2000

On the final day of the conference, there was a birds-of-a-feather session presented by Erkki Juvonon—the Making of a Conference APL92 St. Petersburg. Having been through the experience last year, I thought this would be interesting. The obstacles faced by the organizers of the St. Petersburg conference made me realize how easy I had it. Obtaining visas for the Russians, and the

attempted coup d'état by the communists in 1991 were among the events that conspired to stop the conference. However, all worked out in the end.



Morning coffee break

After the morning coffee break, Ian Clark again entertained the group with his tutorial on how to count cards in Blackjack in “Drunkard’s Walk and Staggering Fools.”

After lunch, Eric Baelen discussed Codewalker and Watchpoints at the APL2000–Cognos Vendor Forum. After that, Alexander Blattman discussed data-mining solutions.

Alexander Skomorokhov compared APL and MATLAB and showed that MATLAB although interpreted was sometimes



Dominika Dolzycka and Dieter Lattermann at the closing ceremonies

much faster than APL. Then Enrique Alfonseca discussed Noun-Phrase Chunking.

Finally, in the closing ceremonies, Dieter Lattermann acknowledged all those who helped during the conference, especially Dominika Dolzycka who organized the social events.

Post-Conference Tour

The post-conference tour was run on Friday and Saturday, August 28–29. We woke up early on Friday morning, had breakfast and checked out of the hotel, so we could make it to the TU to catch the bus for the Dresden tour. We were there by 8:30, and the bus was due to depart by 9:00a.m. Everyone boarded the bus, but our tour guide, Elke, said that we were missing one passenger. By 9:30 we were almost ready to leave without him, but he showed up at the last minute.



Lunch at Moritzburg Castle

We stopped at Moritzburg Castle for lunch, and then headed to Meissen to see the oldest porcelain factory in Europe. We then headed for the Hotel Andre and checked in for the night.



Participants of the post-conference tour strike a friendly pose on a rainy day

The next morning we were up at 8:00 and the bus left at 8:30 for Dresden. When we got off the bus, it was raining lightly, so we took our umbrellas. By the time we got to the Albertinum, it started to pour. We saw the Elbe River, and then went to the Zwinger pavillion. We went into the gallery of old masters. In Dresden, we saw the Frauenkirsch, which was destroyed during the war and is being reconstructed piece by piece.

Then we headed for Pillniz and ate at the Schosshotel. We toured the Water Palace and gardens, and then the bus took us to another location along the river. It was pouring down rain, and it didn't seem worth it just to look at the river again, but since we were stuck there for a half-hour, we hopped on a covered horse-drawn carriage to the lookout. Peering over the edge, we saw a deep gorge that reminded me of the Grand Canyon! This area is known as Saxony Switzerland. Even though it was raining, the mist enhanced the view.

The bus then took us down to the river where we boarded a steamer to take us to Königsberg. In the engine room, pistons in plain view were furiously turning two large paddlewheels on the sides of the boat. We passed under the cliffs we had seen earlier in Saxony Switzerland. As we neared Königsberg, there appeared a large castle on the hills to the right. As we disembarked, the bus was waiting to take us back to Dresden and then Berlin. ■

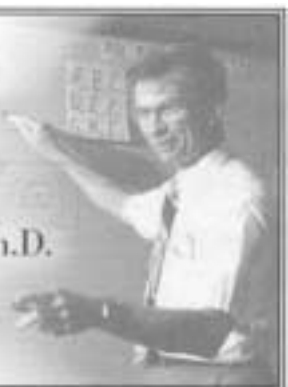
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We want *your* thoughts!

Inside the wrapper of this issue is a *Feedback Form*, asking for your comments about APL Quote Quad and SIGAPL. What did you *like* about this issue? What did you *dislike*? What else should we be working on? We'd really like to hear from you. Can you please take a minute and fill out this form? **If you no longer have the form**, just mail your comments to the Executive Editor of *APL Quote Quad* (or via e-mail, to "Polivka@ACM.org"). ... *Thank you!*