A Brief History of the IEEE International Conference on Network Protocols (ICNP)

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The first ICNP was held in San Francisco in October 1993. However, the initial concept for ICNP arose two-and-one-half years earlier during INFOCOM '91 held in Miami, FL in April 1991. I was at INFOCM that year since the conference theme was "Networking in the 90s" and my PhD student Sanjoy Paul was presenting a paper of ours on conformance testing of protocols in a session on protocols. Krishan Sabnani was also there as session chair, and Sanjoy had spent some time with Krishan at Bell Labs. Even then INFOCOM was an enormous conference, so I was quite surprised to find that our session on protocols had such a small attendance. Later, during the conference Krishan and I were sitting on a couch in the hotel lobby talking and the topic of this small attendance came up. It was clear that there was a lack of interest by the conference attendees in these somewhat formal approaches to networks and their protocols. Protocols were designed and tested in a rather ad hoc fashion without any need for more formal design methods. Even so, there were a number of other successful conferences on formal techniques for specifying, analyzing, designing and testing of protocols that drew that specialized group of researchers working on these formal approaches. What seemed to be lacking, however, was a fruitful interaction between designers of real protocols and the group of researchers developing more disciplined design techniques. This realization spurred us on to thinking about "yet another conference" specifically aiming at filling the gap.

We decided to investigate this possibility: a conference aimed a bringing together people looking at formal techniques for protocols with people actually designing and implementing new protocols. Would this be feasible? Would there be sufficient interest? Who might sponsor such a conference? And what might such a conference be titled? We didn't yet have a name picked out nor any of these questions suitably answered.

To go on further we recruited several others, namely Mike Liu and Simon Lam, to join us as a small task force. Both Mike and Simon were well known in their communities and we knew them both. In fact Mike Liu and I had an interesting interplay going on as to whether we should refer to this field as "protocol engineering" or "protocol science". Of course he used the term protocol engineering which was the term that others were also using at that time; however, wanting to bring in the notion of needing more development in the understanding to the field, I

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[1] This brief history was written in the author's role as a member of the IEEE Computer Society History Committee. The author's memoir of his life in computing may be found at
`http://www.ieeeghn.org/wiki/index.php/First-Hand:Over_50_Years_in_Computing`

espoused the term "protocol science". Anyway, both Mike and Simon readily agreed to participate.

I credit Simon giving us the final idea for the conference title. We knew it should be an *international conference* since people around the globe were active in the field, and we also wanted *protocols* to be in the title. Simon then suggested including *network*. This clinched the obvious word we needed.

Now we had a suitable title but other questions still needed answering. Mike Liu had been involved in starting many conferences and suggested that the IEEE Computer Society Technical Committee on Distributed Processing, of which he was a leader, would be a good group to sponsor the conference, so he looked into this. Mike also knew the details of running a conference through the Computer Society so that was very helpful. Also, to assess interest, we arranged to hold an ad hoc meeting at the April 1992 IEEE International Phoenix Conference on Computers and Communication, where Mike Liu was Program Chair and I was giving a Keynote Address. About 25 to 30 people attended our meeting, most of them invited by Mike. They expressed overwhelming support for the idea of starting such a conference; so during the meeting I started to contemplate a LOGO for the conference, and this is how the large I and C with the smaller N and P inside the C became our logo.

Since I was asked to chair the meeting in Phoenix, Krishan, Mike and Simon drafted me as the initial Chair of the task force and later the Steering Committee which I continued to chair for around five years. Mike Liu graciously agreed to be the general chair for the first ICNP, as long as it would be held in San Francisco! And Mohamed Gouda agreed to be the program chair. With much help from others, we put this first ICNP together and felt that it was very successful.

In 2011 ICNP celebrates its 20th year with the conference being held in Vancouver, Canada. Although most of ICNP's have been held in the United States, it has also been held in Japan, France, Germany, Canada and China. Details for these conference locations, chairs, and presented papers can be found at the ICNP website http://www.ieee-icnp.org/.

After 1995 Krishan Sabnani became chair of the ICNP Steering Committee, and by 2000 David Lee and Simon Lam became co-Chairs, with Ken Calvert taking over in 2009. Other steering committee members included Mohamed Gouda, Teruo Higashino, Mostafa Ammar and Sonia Fahmy.

In the forward to the first ICNP proceedings I wrote: "We hope that the conference will stimulate research and development of new and better network protocols and the ways to design and analyze these protocols. If this occurs, as well as attracting good computer science and engineering researchers into this area of study, we will feel that our original intentions will be satisfied." I think that we have made good progress toward these goals. There is more to be done, and this only bodes well for future ICNPs.