

The Origins of the Conference

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The Early Years

The surviving documentation from the first few conferences is rather sparse. However, a few clear points emerge: The first conference budget wasn't just small, it was infinitesimal. Most of the pioneers did not, at the time, appear to have a clear notion that they were founding an annual event let alone an international conference. Writing afterward, John Linvill the first Program Chair said he thought the conference wasn't informal enough, and already too large. None-the-less he thought holding future conferences on this subject might be useful from "time to time".

The conference name was likewise rooted in uncertainty: In various 1954 documents this conference was to be any of the following: The Transistor Conference, the Conference on Transistor Circuits, The National Conference on Transistor Circuits or even back then, 'the Philadelphia Conference'.

It would take another seven years to sort out the title, finally adding the word "International" in 1960. It took even longer to sort out just what this term "solid-state" meant. Early topics featured transistor circuits, of course, (integrated circuits weren't invented yet) but also: cryogenics, thick and thin film magnetic circuits, and even pneumatic circuits. It seemed for a time "solid-state circuits" meant anything that didn't involve a vacuum tube.

The privacy practices now seem quaint: The first Conference published a full list of all 601 attendees. The list reads today like a "who's who" of transistor pioneers.

Much of the early impetus for the Conference appears to have come from Prof J G Brainerd of the University of Pennsylvania. The first organizing meeting was held September 15, 1953 at IRE headquarters attended by H.J.

Carlin, J.G. Linvill, Dishal and J.J. Suran, all members of certain IRE entities. Co-sponsorship was soon extended to elements of the AIEE. (The IRE and AIEE would later merge to form today's IEEE)

The organizers remember their motivations differently: Most simply thought the time had come!

Murlin Corrington was the original Treasurer and thereafter long time Chair of the Sponsors Committee. Murlin told me at least one of the original sponsors had a covert motive. At the time the local chapter of the Institute of Radio Engineers had a very lucrative practice, teaching expensive classes. Murlin called it a "racket". There was an obvious hole in the chapter's curriculum. They had no transistor course and no transistor course material. There just wasn't any to be had. The local chapter thought by sponsoring the conference, this would bring the missing course material to them. Murlin would go on to play an outsized role the formative years of the conference.

Bob Mayer quickly replaced Murlin as the long term Treasurer. A participant from Sun Oil might seem an odd contributor to a transistor conference. However, at the time, Sun Oil had a sizable patent portfolio in transistor circuits. Bob was a skilled Treasurer with a singularly focused goal. "His" conference was not ever going to lose money..... and it didn't.

Henry Sparks became the Local Arrangements Chair. Henry knew the neighborhood as a resident of Philadelphia and another representative of the University of Pennsylvania. The University of Pennsylvania was one of the founding sponsors of the Conference. For many years its name remained on the ISSCC emblem.

Perhaps the most interesting character was Lew Winner. When Lew was hired back in 1956 to provide some editorial oversight to the Digest, he was so timid and self-effacing he didn't even put his name on the publication. His persona would steadily evolve.

For three decades these four people provided most of the direction and the business acumen of the Conference.

This new conference should stand out for its Spartan ways: A rigorous 2 ½ days program devoted strictly to quality technical papers. Back then, no social hour or industrial exhibits were to be allowed. The sponsors had seen too many rival conferences sublimated by their own exhibits. Even the chosen venue of Philadelphia in February seemed to fit the Spartan motif.

The original Program Committee was drawn largely from the IRE 4.10. The number “4” designated this as a subcommittee of the Circuit Theory Group of the Institute of Radio Engineers. In those days subcommittees were chartered more-or-less exclusively to write standards. The 4:10 quickly assumed a “buccaneer” reputation. It was allegedly the only “standards” committee with no intention of ever writing a standard. It was intentionally formed with no more than one member from any given company. This, it was said, was to keep the members from getting fired by their employers for what they were discussing!

In the early years the Program Committee had to each year reorganized itself to cope with plethora of papers which could fit under the aforementioned and **very** wide “solid-state” umbrella.

The program of the first conference in February of the 1954 consisted of papers from just six organizations: Bell Telephone Laboratories, General Electric, RCA, Philco, MIT and (of course) the University of Pennsylvania. There was no equivalent to today’s Digest of Technical Papers. Attendees received a booklet of abstracts. A few authors thoughtfully brought along some copies of their papers. The supply of hard copies quickly ran out. Projection equipment was supplied by some locally based Program Committee members.

The Philadelphia Mystique

For the first 25 years of its existence ISSCC met religiously every February in Philadelphia. That was for reasons of history, sponsorship, and implied dedication and sincerity. Why hold a conference in Philadelphia in February

for any but the most noble of reasons? Attendees braved cold, slush, ice and, for many, a long walk between the conference hotel to the University of Pennsylvania campus. Each year Local Arrangements Chair Henry Sparks would alert the Philadelphia cab companies of the coming transportation crisis. Each year the cab companies would ignore his warnings. By the final day of the conference, the cab drivers would have figured it out for themselves. Even the conference hotel contributed to the mystique with just three elevators which were never designed to accommodate the kind of surge traffic ISSCC generated. The month and venue had a more practical downside: This meant virtually daring the February weather to create a transportation disaster. Each year the conference would somehow escape. Until 1975! That February provided a monster ice storm that closed down every single airport in the northeast of the United States. Attendance plummeted! I remember it well; I was Program Chair that year. Understand, I didn't feel personally responsible for the ice storm; however, I also didn't relish the idea of having my name forever associated with the only year the conference lost money. I reckoned without the resourcefulness of conference Treasurer Bob Mayer. You may recall; Bob didn't think HIS conference should ever lose money. Bob promptly put on a virtuoso performance of 'creative accounting'. He finished by closing the books in record time. Bob then "discovered" some additional bills coming in late. Never mind, "they would be paid by the next year's conference". Back in those days ISSCC's parentage was so varied and diffused, that no single sponsor had the responsibility for auditing the books...and so they weren't.

The Transition Years

By the late 1960's the center of semiconductor development was shifting west and the international nature of the Conference was coming into sharper focus. Western attendees became more vocal about shifting the Conference to San Francisco. Unsurprisingly the founders preferred their 'Philadelphia home. The Philadelphia Mystique' had a demonstrable advantage: ISSCC had been virtually recession-proof while it remained in Philadelphia. A campaign orchestrated by David Hodges of U.C. Berkeley, in time, convinced the sponsors to at least try San Francisco in 1978.

For about ten years ISSCC alternated between San Francisco on the west coast and either Philadelphia or New York City on the east coast. Then in 1990 San Francisco became the Conference's permanent home.

By the mid 1970's Lew Winner was the effectively the general business manager of the Conference. His actual title was "Public Relations" which he kept to the end and well beyond the point when it was anywhere near descriptive of his duties. He worked Herculean hours for a modest fee. His ability to resist sleep deprivation was storied and his self-effacing persona steadily evolved into 'resident curmudgeon' and 'holy terror' of the Conference. As the other business leaders retired, for reason of continuity, the Executive Committee was reorganized with Jack Raper as the multi-year Chair of the Executive Committee. Jack was Lew's perfect foil. He was the very essence of a diplomatic Englishman. Jack could have negotiated an armistice between the Hatfields and the McCoys. That meant Lew now had free license to step on nearly everyone's toes, and so he did.

Expansion in the Modern Era

In 1988 as Lew approached his last days, it became clear Lew's many duties urgently needed to be de-centralized and dispersed. I was appointed as Jack Raper's successor. I was first joined by John Wuorinen as Editor of the Digest and by an enlarged and longer tenured Executive Committee. Since that time ISSCC has had just three other Executive Chairs: John Trnka, Timothy Tredwell and Ananatha Chandrakasan, each of whom has overseen major expansions in conference offerings. No modern conference can survive based on the premises of sixty-five years ago. Much of the modern ISSCC was unimagined and possibly unimaginable by the founding pioneers. Annual attendance has expanded from hundreds to around 3000. What was once a compact 2 ½ day agenda now spans the better part of a week. Conference features added in the last three decades include the: the Short Course, Short Papers, Tutorials, Visual Supplement, Technical Book Display, Forums, Industry Live Demonstrations, Student Papers and more.

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