

The history of fire technology is explored for clues to guide future fire technology efforts. Emphasis is placed on those factors that encouraged, retarded, or restricted past efforts. The data were gathered from a series of interviews with persons involved in many of the past advances. Specific discussion is given to advances in the areas of risk appraisal, suppression, compartment fire modeling, and structural endurance.

My charge is to trace the development of selected fire protection methods. I have been asked to report on 1) the forces leading to the development and use of the methods, 2) the barriers that were faced, how they were overcome, the lessons learned, and 3) how did we get to where we are today.

I approached this task by conducting a series of interviews with persons who have been in the forefront of the development of some of today's fire protection engineering computational methods. In some cases, I was able to obtain some very good information; in others, hardly more than a chronology of events. In no case was I able to completely answer all of the questions raised by the Steering Committee of this Conference on Firesafety Design in the 21st Century. I believe, however, that I obtained interesting and useful information that can be helpful to this assembly in its deliberations.

The forces at work varied widely. They included industries seeking a new market or striving to protect an existing one, nations protecting their assets during war, a nation attempting to recover from the devastation of war, government programs in the US and elsewhere fulfilling their charge to improve the lot of their people or meet national interests, NFPA Committees striving to either improve a standard or keep up with the changing environment of the hazard being addressed and the fire insurance industry responding to demands to insure higher risk facilities.

Two common barriers that had to be overcome were obtaining the resources needed for development and gaining acceptance of the product produced. In those instances where research and development were well funded, a blossoming period occurred. Acceptance is another problem. Technology transfer in any field requires a technical consensus on the validity of new methods. In our profession it is often difficult to develop truly professional consensus. The small academic base is, in my opinion, part of the problem. In other engineering disciplines, academic achievement and acceptance is an integral part of the technology development procedure. In fire protection engineering education, the academic departments have historically tended to accept and teach practice rather than produce methodologies.