Tekniska "summaries" till varje presentation finns listade i Appendix (på engelska):

1. We want to be able to predict the development of a fire in an enclosure of arbitrary complexity. We have started with a mathematical model valid for a single room, with multiple vents and objects in it. The fifth version of the model has just been completed; it is the Harvard Computer Fire Code V, or Mark 5 for short.

In 1977, Factory Mutual Research Corporation carried out a series of eight wellinstrumented full scale room fires, against which the program can be tested. The standard configuration is an 8' x 12' x 8' room, with an open doorway; a slab of polyurethane foam is in one corner, and a P. U. foam target in a facing corner.

The other tests are variants of this one. We compare the results of the calculations with the results of the experiments, and we find that the results are reasonably good for the standard configuration and for test 7, doorway with no jamb. They are fair for the case with a narrow doorway, and only fair to poor for the other cases: a pool fire; an open window only, and a window as well as a doorway. All these results are displayed and discussed. The most probable reason for the disagreements are the inadequacy of the plume and frame models.

2. (Fire in industrial buildings): A fire model has been developed, which describes the fire growth in rooms in a time dependant manner. The building is an industrial hall with an area of 20 x 50 m2. The mathematical model includes the effects of the fire to the building. During the fire development a hot gas layer increases in height, depending on the outflowing hot gas and the inflowing air through openings in the side wall and the roof.

The hot gas in the layer, its mass and its temperature, has an important influence on the thermal radiation. Therefore in relation to time or in relation to the altering height of the layer thermal radiation between hot gas layer, fire plume, roof behind the layer and floor will be determined.