

## **Building a crystallographic instrument company - planning and serendipity**

**Susan Byram<sup>1</sup>**

**<sup>1</sup>Crystallographic Systems, Bruker AXS**

***sue.byram@bruker.com***

The company that is Bruker AXS today has its North American roots in a 1968 proposal to Syntex Pharmaceuticals, to start up an X-ray instrument division. It was as much serendipity as good planning that Bob Sparks was already on staff as head of Syntex' scientific computing center. Bob was a crystallographic software expert in that newly emerging field, notably collaborating with Dorothy Crowfoot Hodgkin on the vitamin B12 structure calculations. Syntex management moved forward with the proposal and Bob rolled up his sleeves to write an innovative data collection software package single handedly, resulting in the introduction of the P1bar minicomputer-controlled single crystal diffractometer at IUCr Stony Brook in 1969.

Economics always played a role in the development process, with some critical bets on future technology justified in multi-year proposals to fund them, but some lucky events were also turning points in the evolution of the company. When interviewed, users typically split their desires for new instrumentation between 'more powerful' and 'easier to use' and these two principles can be seen in many of the software and hardware advances.