19.X-4 STATUS OF VOLUME C. By A.J.C. Wilson, Crystallographic Data Centre, University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EW, England.

Volume C was originally planned as an editorial condensation of the existing Volumes II, III and IV, with obsolete or readily available material eliminated, and tables for which a pocket calculator would be an acceptable substitute reduced to a skeleton tabulation. Consultation with the Chairmen of relevant Commissions, however, convinced the Editor that much fundamental re-writing would be necessary if Volume C were to be a worthy companion to Volumes A and B. Since the volume is largely directed towards experimental crystallography, the material is widely disparate, and it was therefore necessary to find a large number of authors, some of them responsible for only a couple of pages, others for substantial chapters. The Volume is in ten Parts, each divided into chapters and sections. The Parts are:

1. Crystal Geometry [0]
2. Diffraction Geometry [H]
3. Preparation and Examination of Specimens [H]
4. Production and Properties of Radiations [S]
5. Determination of Lattice Parameters [H]
6. Interpretation of Diffracted Intensities [H]
7. Measurement of Intensities [H]
8. Refinement of Structural Parameters [S]
9. Basic Structural Features [H]
10. Precautions Against Radiation Injury [C]

The Parts differ widely in degree of completion. The situation at the beginning of February 1987 is indicated by the symbols in square brackets: C = complete, S = some sections missing, H = in rough draft or about half complete, 0 = nothing in the hands of the Editor.

Authors with good word-processing facilities have been asked to supply disks or tapes of their contributions, in addition to the usual typescripts. The Technical Editor will report very encouraging results obtained with photocomposition direct from these disks or tapes, particularly in Parts 4 and 8.

The Editor is engaged in vigorous 'progress chasing', and hopes to be able to report that Volume C is in substantially complete draft at the time of the Open Commission Meeting. Sections still missing at that time may have to be postponed to a second edition.

19.X-5 STATUS OF PHOTOCOMPOSITION DIRECT FROM AUTHOR-PREPARED DISK OR TAPE. By M H Dacombe, International Union of Crystallography, 5 Abbey Square, Chester, England.

More than twenty authors expressed initial interest in submitting all or part of their contributions to Volumes B and C of International Tables for Crystallography in machine-readable form. These authors were invited to send sample disks and/or tapes for the printer (Arrowsmith, Bristol, England) to evaluate. The printer has been able to read approximately two-thirds of the samples received. Based on the results of the examination of these samples Guidelines were prepared. These Guidelines give details on how material should be submitted and also list various options concerning the translation of codes.

The results obtained are discussed with respect to any saving in costs and also with respect to increased accuracy resulting from material not having to be re-keyboarded.

19.X-6 EXPERIMENTS WITH ELECTRONIC TRANSMISSION OF SCIENTIFIC TEXT. E. Prince, Institute for Materials Science and Engineering, National Bureau of Standards, Gaithersburg, MD 20899, U. S. A.

The ongoing revolution in computer hardware, particularly the development of the laser printer, has liberated publication technology from the restrictions imposed by the need to conform to some finite set of distinct characters available to the typesetter. The number of typefaces and sizes that can be painted by a laser beam is effectively infinite, and, although with coarser resolution, a cathode ray tube display is also capable of a similar range of symbols. The human being who must ultimately generate the material to be presented is, however, limited by a keyboard with a relatively small number of keys and combinations of generally no more than two keys. Efforts to overcome this restriction have resulted in some extremely sophisticated software to translate the limited vocabulary of the keyboard to the unlimited set of instructions that might be given to the display device, but there is an inverse relation between the versatility of this software and its "user friendliness", the ease with which an operator can learn to use it to its full capability. Communication between computers, although faster, is subject to many of the same limitations as a person working at a keyboard. Simple text, using only the 95 printing characters in the ASCII code, can be easily transferred from one computer to another, but the complexities presented by scientific text make communications more difficult. We have experimented with a word processing package that has good ability to handle scientific material and that includes translators that produce files that are suitable for intercomputer communications, both over telephone lines and over networks. Both hardware and software exist for the transmission of scientific text electronically anywhere in the world. Standardization and user friendliness remain as significant problems.