

THE HISTORY OF THE ASIAN CRYSTALLOGRAPHIC ASSOCIATION

Preamble

The history of the Asian Crystallographic Association (AsCA) is presented on this website as a sequence of chronologically-linked HTML records. In the main this history is made up of the existing electronic records: websites for the Association's scientific conferences; the post-conference reports from the local and program chairs; and the minutes of the AsCA Council meetings. However, it wasn't until the AsCA03 conference, the 2003 meeting in Broome, that the programme and proceedings were presented and archived electronically. In its earliest years, the activities and communications of AsCA were recorded almost exclusively as paper letters, documents and books, and these have had to be scanned and digitized in order to be suitable for an HTML presentation.

This conversion effort applied particularly to the period leading up to the formation of AsCA in 1987 when records are either hand-written, typed or printed documents i.e. letters, hardcopy minutes, pamphlets and conference booklets. As many documents as possible from this period have been converted to pdf files, and some of these have been saved as Word files (which are amenable to text searches). *The exceptions to this, at the moment, are the printed conference program/abstract booklets for the years 1992, 1995, 1998, and 2001, all of which are several hundred pages long. It is hoped that this will be rectified in the future, as these booklets contain the same information as in the website material for the conferences from 2003 onwards.*

The history of AsCA's first 25 years has been compiled by a working group composed of crystallographers from Australia, China, India, Japan, New Zealand and Taiwan. In the most part this history is presented as a chronological sequence of HTML documents and websites. However, for the earliest years from 1978 to 1987 that led to the establishment of AsCA, a text document in HTML encapsulating the communications and documents over that period has been prepared.

The difficulties in capturing older historical material are most prevalent in records for the years prior to the establishment of AsCA. During this period the majority of communications concerning the formation of a regional group was between individuals, mostly as letters. These, and sundry other paper documents from the period, such as minutes, newsletters and booklets, have survived in a mostly random, somewhat serendipitous, fashion. Almost all were retained without a history in mind but more as a by-product of several people who filed everything! Nevertheless, since the majority of scientists involved in AsCA's early years are not here to tell their story, these paper records are very important to this history, especially over those first seven or eight years.

Complicating the fragmentary nature of our record of those earliest years, is the fact that many letters and documents exist as poor type-written *carbon* copies that are almost illegible. These can be scanned into pdf files but it is nigh on impossible to convert these analogue images into digital ASCII characters. In the 1970's and 80's most communications were either handwritten or typewriter-produced letters that were delivered by the postal service. This was the normal way that people communicated, even within the same city! It wasn't until the nineties that electronic mail became commonly available, and not until post-2000 that one could rely on a correspondent somewhere in the world having access to the Internet and being contactable by email.

The rapid evolution of communication modes over AsCA's short history is relevant because the history-gathering effort indicates that if the discussions surrounding the formation of AsCA had

taken place by email, our records of this period may have been *even less*. As it is, the history of the early years is largely dependent on the hardcopy material retained by two or three individuals. For the punctiliousness of these scientists, AsCA historians must remain eternally grateful. But we must heed this warning for future historical efforts: important electronic communications within the AsCA organization must be efficiently recorded and archived.

AsCA History PART 1

Crystallographic Pioneers in the Asian Region

Although the science of “crystallography” largely originated in Europe and expanded rapidly following the discovery of [ionizing radiation](#) by [Wilhelm Röntgen](#) in 1895 and of crystal [diffraction](#) by [Max Von Laue](#) in 1903-6, some of the earliest investigations into the nature of crystalline material were in fact carried out in the Asian region.

As the brief overview given below clearly shows, several Asian countries, and Australia, India and Japan in particular, were pioneers in this field. It is not surprising therefore that they saw a need in the 1970’s and 1980’s to cooperate and to consolidate their efforts by sharing expertise and the increasingly expensive equipment needed, in order to remain competitive in the field.

Here is a snap shot of the earliest pioneering efforts that provided the impetus for the formation of the [Asian Crystallographic Association](#) in 1987.

In Australia:

Crystallography started with [William Henry Bragg](#) who was Professor of Mathematics & Physics at the University of Adelaide from 1886 to 1908. There he experimented with ionizing radiation shortly after its discovery. W.H. Bragg’s son, [William Lawrence Bragg](#), was born and educated in Adelaide and the two Braggs - who moved to the UK in 1908 - were awarded a father-and-son Nobel Prize in 1915 for “their services in the analysis of crystal structure by means of X-rays”.

In the 1950’s crystallographic sciences experienced a resurgence in Australia through the leadership of A. McL. (Sandy) Mathieson, Barrie Dawson, David Wadsley, John Cowley and Alex Moody at the CSIRO in Melbourne, and Hans Freeman at the University of Sydney. A remarkably collegiate group, they generously shared their expertise and instruments with younger researchers starting work in the universities across Australia. By the 1980’s there were over 25 crystallographic laboratories at universities and government institutions in Australia and approximately 250 scientists doing research in crystallographic fields.

In Japan:

In 1913 T. Terada observed diffraction spots that moved according to the crystal. He reported, in *Nature*, paralleling that reported in *Nature* in 1913 by Bragg. That year S. Nishikawa and S. Ono published a Laue photograph of asbestos fiber. Nishikawa, stimulated by T. Terada’s work, began diffraction studies on fibrous materials. This was also published in 1913. In 1915 Nishikawa studied the structure of spinel using Laue techniques. In 1928 Nishikawa and K. Matsukawa verified the breakdown of Friedel’s law for anomalously dispersed incident X-rays. This work was reported two years earlier than that of Coster, Knol, and Prins (1930). In 1922 Nishikawa formed a research group at the Institute for Physical and Chemical Research (Tokyo). In 1926 I. Nitta, a member of the

group, found the reported space group of pentaerythritol to be erroneous; he served as Vice President of IUCr 1963-69. In 1928 S. Kikuchi, a member of Nishikawa's group, did high-energy electron diffraction (HEED) studies on single crystals of mica and observed what is now known as the *Kikuchi* pattern. In 1924 T. Ito, formed a research group on mineralogical crystallography at the Univ. of Tokyo. In 1933, I. Nitta established a crystallographic research group at Osaka Univ. N. Kato studied X-ray dynamical diffraction, section topographs and secondary extinction. He was President of IUCr 1978-81, and was a winner of the IUCr Ewald Prize. K. Kohra was the principal scientist at the Tsukuba Photon Factory. From 1945-55 T. Ito with R. Sadanaga, Y. Takeuchi, and N. Morimoto determined mineral structures. T. Ito developed a powder indexing method, known as the Ito method. He also established the concept of a 'cell twin', or 'Ito twin'. Sadanaga systematized this theory. Takeuchi studied mineral structures at high pressure and temperature. N. Morimoto, M. Tokonami and Y. Koto studied structures, superstructures and phase-transitions of minerals. In 1954, using anomalous dispersion, Y. Saito and collaborators determined the absolute configuration of the complex ion $[\text{Co}(\text{en})_3]^{3+}$. Y. Okaya, Saito and R. Pepinsky proposed the theoretically attractive $Ps(u)$ function. Okaya and Pepinsky formulated the relationship between structure factor phases and anomalous dispersion terms. In 1958 Y. Tomiie *et al.* studied precise electron density distribution in diformylhydrazine and obtained agreement with the one calculated by the MO method. Saito, F. Marumo *et al.* studied precise 3d electron distribution in transition metal ions and Saito, H. Iwasaki *et al.* studied electron density distributions in charge transfer complexes. In 1967 T. Sakurai and T. Ashida wrote the program system UNICS. In 1968 Rigaku Corporation produced the first Japanese computer-controlled four-circle diffractometer. Thereafter, the precision, as well as the speed, of structure determinations in Japan improved dramatically. In 1983 Tsukuba photon factory 2.5GeV came into operation and provided a further platform for the rapid development of crystallography in Japan, and commensurately a large increase in the number of Japanese researchers involved in structure determination.

In India:

Crystallography started with K. Banerjee, a student of C.V. Raman at the Indian Association for the Cultivation of Science, Calcutta (now Kolkata) in the 1930's. In addition to carrying out crystal structure analysis, K. Banerjee was an early worker on crystallographic *direct methods* (deriving structure factor phases from intensity relationships).

Other crystallographic pioneers include G. N. Ramachandran, S. Ramaseshan and A. R. Verma. The contributions of G.N. Ramachandran and S. Ramaseshan in the 1960's to 1990's were to crystallographic and structural methodology, and to the foundations of crystallography. G. N. Ramachandran was a pioneer in computational biology, molecular modeling and bioinformatics. Both were students of C.V. Raman. A.R. Verma was a physics-oriented crystallographer who in the latter part of the 20th century worked in the field of crystal growth, defects in crystals, polymorphism and polytypism.

In New Zealand:

Crystal Structure analysis began with the appointment of Frederick J Llewelyn as Professor of Chemistry at Auckland University in 1948 and the return to the University of Canterbury in 1952 of Bruce Penfold, after completing a PhD in Cambridge in Bragg's laboratory under the supervision of W. (Bill) Cochran. Another well-known pioneer of crystallography, [Lindo Patterson](#), was born in Nelson, New Zealand, in 1902. His family moved to Canada when he was 18 months old, and later to London when he was 14. Equally famous is [Maurice Wilkins](#), who shared the 1962 Nobel Prize with Watson and Crick. He was born in Pongaroa in 1916 and moved with his family to England when he was seven.

Crystallographic research prospered in the 50's and 60's and produced a considerable number of well-known crystallographers. One of these, Ward Robinson, also established a crystallographic service at Canterbury to collect data and provide mentoring for a number of 'crystallographers *sans* diffractometers' at other Universities and Government research establishments. Protein crystallography began at Massey University in the early 70's with the appointments of Sylvia Rumball and Ted Baker. Currently there are thriving crystallographic facilities in Auckland, Massey, Canterbury and Otago Universities.

In China:

Awaiting contribution.

In Korea:

Dong-Gil Park gave the first set of lectures on crystallography in 1952 at Seoul National University. Chung-Hoe Koo determined the structure of small molecules by X-ray crystallography in 1960, when he returned from the laboratory of Isamu Nitta at Osaka University. A sealed-tube X-ray generator and a Weissenberg camera were used until 1969 and in 1979 a 4-circle diffractometer was installed in Chung-Hoe Koo's laboratory. In materials science, Su-Jin Chung introduced crystallography to Seoul National University in 1976. Biological crystallography began in the late 1980's, when Sangsoo Kim at LG Life Science and Se Won Suh at Seoul National University acquired the first sets of FAST area detectors. In 1989 the Korean Crystallographic Association was founded by Joong-Tae Ahn, Su-Jin Chung, Young-Ja Park, and about 50 other scientists in the fields of chemistry, biology, physics, and materials science. Crystallographic research accelerated with the opening of Pohang Light Source in 1994, and will be further assisted by the X-ray Free Electron Laser facility to be constructed by 2015.

In Singapore:

Lip Lin Koh, who returned to the National University of Singapore (NUS) in 1964 from Boston University, was the first to introduce crystallography as part of Physical Chemistry. In the mid 1970's, he obtained an X-ray unit, a Weissenberg and a Debye-Scherr camera which were used mainly for demonstrations, and for simple experiments by senior undergraduate students. The first crystal structure publication from Singapore was in 1978 by N.W. Alcock, K.P. Ang, K.F. Mok, and S.F. Tan. K.P. Ang was a former head of chemistry (NUS) and S.F. Tan was an emeritus professor in the same department. In October 1989 NUS acquired a Siemens P3 diffractometer, and Lip Lin Koh and K.F. Mok started collecting their own crystallographic data. In 1992 Lip Lin Koh chaired the local organizing committee for the first AsCA conference, which was held at NUS.

In Taiwan:

The first crystallographic workshop was held in Taipei in April 1985. During the workshop the need of a local crystallographic organization or society was discussed and this was formed in 1987. Since then several colloquia have been held every year. Taiwan joined the Asian Crystallographic Association (AsCA) in 1987 as one of the founding members. Since then regional activities, such as the Japan-Taiwan joint symposia in crystallography, have been held regularly. In order to participate the IUCr, Taiwan formed 'The Crystallographic Committee, Academia Sinica, Taipei' in 1994 with the Chair, Yu Wang; Exec Secr, Shie-Ming Peng; Exec Members, Shih-Lin Chang, Kwang Hwa Lii and Ling-Kang Liuu. Taiwan became a member in IUCr with category II in 1996. In 1993, a synchrotron radiation facility (NSRRC) with 1.5GeV was built in Hsin Chu. In 2007 Taipei held the AsCA07 conference attended by 412 participants. A 3.5GeV synchrotron is currently being constructed and is expected to be commissioned in 2014.

In Vietnam:

Crystallographic teaching and research started at *L'Institut Pasteur de Saigon* in 1891 when Albert Calmette, a pupil of Louis Pasteur, studied the unsymmetrical structure of bacteria by the method of light polarization crystallography. In 1926 similar interests were started at *L'Institut Pasteur de Hanoi*. Crystallography, as a discipline, was established by Quan Han Khang in 1956 at the Faculty for Mining and Metallurgy of the Hanoi University of Science and Technology (HUST). From 1970 crystallographic research has been coordinated by: Le Cong Duong, Do Minh Nghiep, and others at the Faculty for Materials Science & Engineering of HUST; Nguyen Xuan Chanh, Nguyen Van Tri, Nguyen Hoang Nghi and others at the Institute of Engineering Physics; and. Vo Vong, Nguyen Xuan Phuc and others at the Academy of Science and Technology of Vietnam.

AsCA History PART 2

The Genesis Years: 1978-1987

Earliest Discussions

The information available to us about AsCA's formation indicates that despite that considerable interest and enthusiasm for the concept of an Asian crystallography group in the region, it took almost a decade to agree on what form it should take, who would be eligible to join, and how it should be administered. These pre-establishment years were certainly not without their difficulties and controversies, and it is hoped that readers will find our record of them interesting.

The first mention of a regional group of crystallographers in Asia appears to have been in the September 11 1978 Newsletter of the Society of Crystallographers in Australia (SCA). In this there was a [report](#) by the SCA President Neville Stephenson on the proceedings of the Eleventh General Assembly at the 1978 IUCr Congress in Warsaw, in which he stated that:

“The Union also considered applications for membership of the Union as Associated Organisations. The International Organisation for Crystal Growth (IOCC) was subsequently admitted as a Scientific Associate of the Union and the European Crystallographic Community (ECC) as a Regional Associate of the Union. Representatives of such Associate Organisations may attend General Assemblies of the Union to take part in the discussions, but not in the voting. This decision suggests that other countries or scientific bodies may form Regional Groupings (viz. Australia, Japan, China and India) to enter into more formal arrangements with the International Union. The roles of the Australian Academy, the National Committee for Crystallography and the Society of Crystallographers in Australia would have to be clarified in order to proceed with such an affiliation.”

Clearly there were discussions on an Asian regional grouping prior to this announcement, but no earlier written records have been found. Nevertheless, the reasonably advanced nature of discussions between Japanese, Australian, Chinese and American crystallographers had culminated in an *ad hoc* formation meeting being held at the 1979 American Crystallographic Association conference in Hawaii. The [minutes](#) of the *Projected Formation of Pacific Regional Group* meeting held on March 27 1979, states that:

“At the International Union of Crystallography Meeting in Warsaw, August 1978, Drs. Sabine (Australia) and Krishna (India) suggested to Dr. Kato that an Asian crystallography meeting,

including the Middle East and Israel, should be held. The United States had, at the same time, expressed an interest in a Pacific Regional Community, including India. The collaboration with the Japanese Crystallographic Society in the organizing of the Hawaii meeting was seen as the first step in this direction. The location of the Hawaii joint ACA-JCS Meeting, plus the presence of two crystallographers from the Peoples' Republic of China (Drs. Tang and Xu), made this an appropriate time to consider such an association of National Crystallographic Associations in the Pacific area.”

This meeting was attended by Professors N. Kato (as Chair) and S. Hosoya from Japan; Professors Y-C. Tang and X-J. Yu from the P.R. China; Professors P. Coppens, H. Wyckoff, and J. Glusker from the U.S.A. Prof Philip Coppens is cited as saying:

“... in discussions with Sabine (Australia) and Kato in Kana, Hawaii (Modulated Structures Meeting), it was felt that a Pacific Regional Group should start modestly with steps to stimulate a collaboration (such as the exchange of newsletters or a common text to parts of all National newsletters, exchange of scientists at all levels and access to equipment and facilities). These steps should then lead to increased scientific interactions. Also lecture tours, visits to other laboratories, and exchanges of postdoctoral students could result.”

At the close of the Hawaii meeting a working group was set up to investigate the feasibility of such an affiliation and was to be composed of two representatives each from the P.R. China, USA, India, Australia and Japan. Professors Tang, Coppens and Hosoya were members of this working group and they would solicit appropriate representation from their own countries and from Australia and India. It was stressed that:

“The name of the regional group will be discussed by the working group and the present one, ‘Pacific Regional Group’, is very provisional (particularly since India is interested in joining).”

A postscript to the Hawaii minutes (which were signed by Prof J.P. Glusker) reads “*Professor Kato will not be a member of the working group, at least not during his time as President of the IUCr.*”

This Pacific Regional Group meeting initiated discussions in all the involved countries, though scant records of these remain. In April 1979 there was an SCA [report](#) from the SCA President Neville Stephenson, which stated that:

“A meeting of the Australian National Committee for Crystallography was held at the Academy on Friday 15th December, 1978. The committee discussed a report on the Eleventh General Assembly and Congress of the International Union and in particular, the consequences of the acceptance of Associated Organisations as members of the Union. It was decided to explore the possibility of forming a Regional Grouping of Asian and Pacific crystallographic communities and perhaps hold a meeting, of yet undetermined format, in Singapore during 1983. Such a Grouping would function in a manner similar to the European Crystallographic Community (ECC) and could seek membership of the International Union as a Regional Associate with similar rights and privileges.”

This particular Australian National Committee meeting preceded the Hawaiian meeting and it is clear that the Australians were aware of the discussions about a pan-Pacific grouping at that stage. Later that year Professor N. Kato, as President of the IUCr, gave a [speech](#) at the close of the 1979 ECM5 conference and said, in part:

“Perhaps it would be appropriate to mention that our Union has established a new form of membership, which is called "Regional Associate". This action was taken at the General Assembly in Warsaw last year. Your organisation is the first one to join the Union as a Regional Associate. The intention of this action was that you could have a more international character and could increase your scientific activities.

In the Pacific and Asian region, it has been suggested that a similar organisation might be established, and a few countries are now discussing how this might be done, to take account of their national requirements without harming any international principles. In this respect, your activities will set a good example to be studied by the child who will be born in the near future.”

On November 19 1979 Prof N. Kato [replied](#) to a letter (of which there is no record) from Prof T. Sabine (University of New South Wales, Australia) about another regional group meeting to be held in Madras in early 1980. Prof Kato pointed out that he could not attend this meeting for several reasons - one of which was he considered it inappropriate that the President of IUCr be involved in the formation of a regional group that would need to be approved by the IUCr Executive. Nevertheless, to ensure input from the Japanese community on this matter, he asked:

“. . . could you inform me of the Agenda of your Meeting and the time schedule which may help some <others>.”

He went on to say:

“At the present moment, I am thinking to ask Professor Hoshino, the Chairman of the National Committee and Prof Hosoya, the Chairman of Japanese Crystallographic Society to send you a letter which explains the situation in Japan. Such information may help in your discussion at Bangalore to some extent even when I cannot attend your meeting. Incidentally, I have given them always all information from you and Professor Krishna.”

The “Pacific Regional Group” Meeting in Madras

There is no specific record of who initiated the Madras meeting, but a [letter](#) dated November 20 1979 from Terry Sabine to Ted Maslen (University of Western Australia) explains its purpose and timetable. It was to be a “steering committee” meeting of the Pacific Regional Group and would be held at the University of Madras on January 15-16 1980. It was timed to immediately follow the IUCr Winter Crystallography School in Bangalore on January 13-14. Terry invited Ted, as the next President of the SCA and who would be part of the Bangalore school, to participate in the Madras meeting on behalf of the SCA. It seems likely that he had earlier asked the same of Norio Kato.

On December 11 1979 Terry [wrote](#) to Ted again with details of the Steering Committee organization indicating that the convener was Prof R. Shrinivasan at the University of Madras. The meeting [agenda](#) accompanied the letter along with a draft of a proposed [constitution](#) for the Asian/Pacific Group.

Some excerpts of this draft constitution are pertinent here because of correspondence that

follows. In particular parts of the draft, state:

“ (f) The executive will meet at least once per year at times and places to be determined by it;

(g) Expenses of executive members will be met by the Society. With the approval of Council secretarial assistance to the executive can be provided from the funds of the Society.

5. Finance

(a) Each of the founding nations will provide the sum of \$A5,000 to provide initial working funds;

(b) The Council will determine an appropriate annual membership fee as it sees fit. The fee will be set individually for the three grades of membership;”

These clauses imply that a reasonably formal organizational structure was envisaged. Also the proposed membership fee, which was clearly based on the fees for IUCr membership, was significant, and this was likely to prove an obstacle for some countries (as indeed similar amounts remain a problem for some countries to join the IUCr). Prof Kato alludes to this in a [letter](#) to Prof T Sabine December 24 1979, with the following comment:

“Here, for your information, I shall enclose the charter of ECC which, I guess it was circulated at Warsaw last year. It seems to me that ECC works with a vague constitutional structure. I also had an image of our regional organisation similar to ECC, at least at the beginning. My most concern was how to overcome the difficulties due to geographical remoteness among Asian/Pacific Regional Countries. If we start with so much rigid constitution, I am afraid of that we need a large amount of finance to accomplish the activities.”

In a subsequent [letter](#) to Prof R. Shrinivasan (on December 28 1979), Prof N. Kato explained that he was unlikely to attend the steering committee meeting in Madras on January 15-16. He also gave a summary of the events that led to this meeting, as follows:

“ Because of my present status, not simply due to the heavy load of IUCr but as the President of Union, I thought that I should observe what is going on in the crystallographic community in Asian/Pacific region and should not be directly involved at least at the beginning. When, however, I knew a month ago that no one can attend the important meeting from Japan, I started to seek the possibility to attend the meeting as a personal status. For this purpose, as stated in the letter to Professor Sabine I need a rather drastic way to cut red tape for getting permission to go abroad. Recently, unfortunately I was informed from a travel agency that the flight to Singapore is already full with nearly 30 waiting persons. Under this circumstance, I cannot push the special arrangements to get the permission and I gave up to pursue attending Madras Meeting.

As you already mentioned in your early letter to me (9th April), it is very desirable to have a regional group whatever the form is in Asian/Pacific Region. The suggestion was given to me also from Professor Krishna and Professor Sabine at Warsaw, the last summer. At Hawaii, March of this year we had an ad hoc meeting on this matter. I believe you already got the Minutes prepared by Dr. Glusker, USA. Then Professor Sabine was nominated

as a chairman. This is the history of our undertaking.”

The prospect of a regional association, along the lines proposed for the Asian/Pacific Group, was not received with unanimity in Australia. Ted Maslen (SCA President 1980-82) had declined to attend the meeting in Madras, for reasons that are stated below. And moreover, on January 16 1980, the day of his return from the IUCr Winter School in Bangalore, he [wrote](#) to the Secretary of the SCA, Michael Snow, requesting a motion be tabled at the next SCA Council meeting stating:

“That the Australian Academy of Science and the Australian National Committee for Crystallography be approached with a view to them initiating a withdrawal by the International Union of Crystallography of its recognition of Regional Associates”

His request included a [statement](#) giving the reasons for the motion. The most pertinent parts of this rather long document are:

“ The success, in the scientific sense, of the European Crystallographic Committee produced a climate favourable to the formation of other regional groups. Opinion in the United States favoured the formation of a group including China, Japan and Australia - the pan-Pacific nations.

The United States initiatives were discussed by the Australian National Committee for Crystallography. There was general support for the need for improved communication among the crystallographers in the Asian region. A majority was in favour of the accepting the American initiatives as they stood. Some of the Committee had reservations about the appropriateness of the proposed grouping of countries. It was recognised that some problems might arise if India were to consider joining the group, but this had not been firmly proposed and was not given serious consideration at that time. However firm proposals for a regional grouping involving India, China, Japan the United States and Australia have now emerged.

I have doubts about the viability of a regional group encompassing cities as remote from each other as Bombay and Washington. My main concern, however, is the reaction of the eastern european countries to regional groups which are defined in terms of political, rather than geographical boundaries.

There may be convincing reasons why such groups should exist, but I cannot see any good reason why they should receive recognition by the I.U.Cr. Any advantages arising from the I.U.Cr's imprimatur are far outweighed by the threat which this poses to the union's stability.”

Prof Maslen subsequently received a [letter](#) (dated January 23 1980) from Prof R. Shrinivasan concerning the disagreements within Australia on the formation of a regional group. One might conclude from this letter, and from the motion that Ted had tabled for the next SCA meeting, that discussions between Ted and Terry had taken place in Bangalore prior to the Madras. Prof Shrinivasan refers to recent communications, and goes on to say:

“I notice that the Hawaii meeting was also apparently started off first as an informal ad hoc group meeting and the Madras one also seems to be somewhat on the formative stages. I strongly feel that opinions and consensus for or against such grouping in individual countries will first have to be handled by individual countries

themselves before coming to the common forum of international group meetings. I do hope you will be able to thrash these out with your colleagues and scientists in Australia before the Australian views are presented to the group meeting committee.”

These conflicting views are further revealed in a [letter](#) from Terry Sabine to Ted Maslen on January 24th. Terry subsequently tabled the [minutes](#) of the Madras meeting with the Australian National Committee for Crystallography, dated February 4 1980. It is in these minutes that proposed group is first named as “Indo-Pacific”. The minutes, which include a new draft constitution, are extensive, and an excerpt is given here to convey the participation and the nature of the discussions at this meeting.

“ MINUTES OF THE INDO-PACIFIC CRYSTALLOGRAPHY GROUP

Meeting of the Steering Committee held at the University of Madras, India on 15th and 16th January 1980.

Members Present:

1. Dr. T.M. Sabine, Australia (Chairman)
2. Dr. Tang You-Chi, Peoples Republic of China
3. Dr. Ku Hsiao-Cheng, Peoples Republic of China
4. Dr. Philip Coppens, USA
5. Dr. R. Srinivasan, India

Dr. T.M. Sabine, represented the Australian National Committee, Dr. Tang, the Peoples Republic of China National Committee, or Dr. Ku, the Peoples Republic of China Crystallographic Society, Dr. Coppens, the American Crystallographic Association and Dr. Srinivasan, the crystallographers of India.

1. Professor R. Srinivasan welcomed the members of the Steering Committee. He mentioned that as per letter received from Dr. N.N. Saha, Chairman of the National Committee for Crystallography in India, Professor P. Krishna was expected as a representative from the National Committee for Crystallography, India.
2. It is regretted that the Japanese representatives could not attend the meeting, also Dr. E. Gabe from Canada and Dr. E. N. Maslen from Australia could not attend.
3. Professor T.M. Sabine, as Chairman, nominated by the first Hawaii meeting briefed the members on the history of this meeting and gave background information on the Hawaii meeting
4. Business Arising From the Hawaii Meeting: Professor R. Srinivasan, the Indian representative, mentioned that while India was included among the founding nations at the Hawaii meeting, the Madras meeting is the first one attended by an Indian representative. The Hawaii meeting considered the inclusion of India because of the interest shown by India in such regional association. The matter will be followed up through the National Committee and through Governmental bodies.
5. Additional Agenda Items: There was none.
6. (a) Formation of Regional Group: Draft Constitution. The Draft Constitution finalized at the meeting ie given in Appendix I, which also covers other items (6(b), (c), (f)) of the draft Agenda.

(b) It was agreed that the following nations would be eligible for membership: Bangladesh; Burma; Canada; Hong Kong; Indonesia;

Malaysia; New Zealand; North Korea; Philippines; Republic of New Guinea; Singapore; Sri Lanka; South Korea; Taiwan; Thailand; and Vietnam.

(c) It was agreed that affiliation with the International Union of Crystallography as a regional associate would be requested when the group had proved its viability. This was not expected to be before 1984.”

Of particular historical interest in these minutes is the naming of the proposed group as “The Indo/Pacific Crystallography Group”. Also, that the nations eligible to join the group, though not listed in 6(b), include Canada, as well as Australia, P.R. China, India, Japan, and the U.S.A. The proposed ‘entry fee’ for membership given in the constitution remains at A\$5,000. The minutes also record that there were proposals to approach the United Nations and other international agencies to support the activities of the group, and that these activities were to include conferences, schools and research collaborations.

An Alternate “non-Pacific” Group

A meeting of the SCA Council was held in Canberra on February 1 1980. Following that meeting, on February 12 1980, the SCA President Ted Maslen [wrote](#) to Prof P. Coppens, the USA representative at the Madras steering meeting, informing him of the position reached by the SCA on the proposed regional group. In effect, the Australian position was that the perimeter of a south-east Asian region should be bounded by Japan, China, India/Pakistan and New Zealand, and that this would preclude the membership by the U.S.A. and Canada. At the conclusion of the letter, he wrote:

“ A majority of the SCA voted in favour of a Regional Group with India, China, Japan and Australia as founder members. Again this follows fairly closely the opinion the Australian National Committee expressed in 1978.

Although this was a majority view there was a substantial minority vote against it: - the main reason being the belief that, even at this size, such a Group was too large for good management.

It was acknowledged that Australian membership of such a group might appear anomalous, since it is roughly as far from Japan as is the from the United States. On the other hand there is only one possible grouping to which Australia, logically, can belong – i.e. one covering the South-East Asian area. Political instability and limited scientific development preclude the formation of a Group confined solely to the south-east Asian region.

On the other hand the United States is adjacent to Canada, and should clearly play a major role in any Group involving the South-American countries, some of which have scientific bodies which adhere to the I.U.Cr.

The matter is to be further discussed at meeting of the Australian National Committee for Crystallography shortly. I will be representing the SCA at that meeting. I will advise you if there is any change in the Australian positions.”

On the same day Ted must have also written a letter to the President of the IUCr, Prof Nobio Kato. There is no record of this letter but based on Prof Kato’s response one can conclude that it contained essentially the same views conveyed to Prof Coppens. Prof Kato’s [reply](#) (dated February 21 1980) indicates that he, and senior Japanese crystallographers, had opinions on a regional

grouping not dissimilar to the majority view of the SCA. The contents of his reply is cited here in full because it encapsulates some of the general concerns about the proposed "Indo/Pacific Group" arrangement proposed in Madras.

" Thousand thanks for your letter dated 12th February concerning with Pacific/Asian Group of Crystallography. It helps me very much for considering the problems in the future.

First of all, I wish to make clear my stand. It would be better for me to be an observer outside the real organisation of the working group, at least before Ottawa meeting, although I am deeply concerned with the matter. Here, I enclosed several letters which I have sent to a few people for your information.

Next, the Japanese National Committee (the Chairman; Prof. Hoshino) and Japanese Crystallographic Society (the Chairman: Prof. Hosoya until the end of March; Prof. Takeuchi, Dept. Mineralogy, Faculty of Science, Tokyo University will follow after April of this year) also have discussed the matters in the last year. You might be able to hear their official opinions from their Chairmen. Although their approach has been rather slow, the final consensus among Japanese crystallographers is not very far from my personal opinions; I believe.

The following is my purely personal view on this matter which, therefore, is neither Union's official view nor of the Japanese community.

(1) The understanding of crystallography: Please see the red mark of my letter to Prof. R. Srinivasan, Madras.

(2) The problem of including USA as the founder member. It was a surprise for me when ACA wishes to join into Pacific/Asian Regional Group. In general, however, if any organisation wishes to join into this kind of organisation, I think we need not exclude it unless the excluding is obviously reasonable or the including is obviously harmful to the organisation. In our case, the joint of ACA may decrease the efficiency to some extent but not so much.

Of course, the problem depends upon what organisation is aimed to be established. For widening the research fields to be covered, the including USA and Canada might bring about some benefits. As a matter of fact ECC-5 invited lecturers from USA. The same could be done even if USA would not be involved in our group. Nevertheless, if USA and Canada are a member of our regional group, it is easier to invite experts from USA and Canada to fullfil our lacks.

(3) How to overcome the remoteness of the countries in Pacific/Asian groups. For this reason, we may not be able to expect the similar organisation like ECC and ACA, at least at the beginning. Periodically holding Conference might be the second stage of our undertaking. Still, exchanging news-letters, the moral invitation to the domestic meetings and the information on the available positions and facilities would be useful. I think many things we can do without using a great deal of finance.

(4) The problem of joining into IUCr: Again, I must say that I

am observing what consensus will be obtained among the countries. Union will consider after any wishes are proposed. By no means, ECC and ACA which have already been established have any regional patriotism, I believe. Only thing we are hoping is that such regional organisations are beneficial to scientific activities in that region which are very different at the present. My understanding is that the global and regional organisations must have the roles of warp and woof.

Finally, I am very glad to hear any opinions either on personal or an official level. Also, I am very anxious to hear the discussion at Madras meeting in January, to which unfortunately no Japanese could attend.”

There followed wide-ranging discussions on the formation issues across the region. Prof Ward Robinson, from the University of Canterbury in New Zealand, wrote to Dr Jerome Karle (US Naval Research Labs, Washington) seeking his views on the involvement of the USA in an Asian regional group (there is no record of this letter). On February 28 1980 Dr Karle [replied](#):

“ I am sending this preliminary response to your letter concerning the matter of a regional grouping that stretches from India to the U.S.A. I shall write further after the Alabama Meeting where I plan to attend U.S. National Committee meetings and contact the present members of ACA Council.”

Dr Karle went on to conclude that many ACA members were skeptical about the concept of IUCr regional affiliations because it was not clear that there were significant scientific benefits from such recognition. He also questioned reasons why the USA would wish to be involved in a grouping of Asian nations - he stated that:

“. . . I do not see anything practicable about a far-flung Pacific affiliation. Norio Kato and I discussed this and we both came to the same conclusion.”

In a subsequent [letter](#) to Ward Robinson (dated March 31 1980) Jerome Karle pointed out that the prospect of US crystallographers being part of an Asian/Pacific regional group was not widely supported, and was probably the result of over-enthusiasm on the part of a few. This observation essentially marks the end of any North American involvement in the formation of an Asian regional group. However there are many other aspects of the planning and formulation of the regional group to be sorted out yet and establishment as a recognized IUCr affiliate was still over seven years away!

The Formation Models

At this stage of AsCA's genesis it is useful to elaborate on the prevailing arguments for the formation of an Asian regional group. Discussions had not concluded yet on how the group should be formed, or who should belong, however by now only two administratively distinct formation models remained under consideration.

Model one was the Asia/Pacific (or Indo/Pacific) group that was put forward and discussed at the 1978 Hawaii and the 1979 Madras meetings. To a large extent this model copies the way that individual countries were affiliated to the IUCr i.e. through national committees that were responsible to scientific academies. Such a structure has several important consequences. Firstly, it assumed that a regional group would be recognized and supported at the quasi-governmental level of each country; perhaps involving international agreements, and probably involving funding support

from international agencies. Secondly, commensurate with this recognition, one might anticipate a permanent secretariat, and funding support for delegates representing their country at regional group meetings. The proposed [constitution](#) for this model states that there would be a significant membership fee. Although the issue of whether the USA and Canada should be eligible for membership under this model was largely resolved at this stage, it was not completely off the discussion list until the 1984 Hamburg IUCr Congress (as later documents will reveal).

Model two evolved largely in response to the geographical scope and costs of model one. This model envisaged a relatively loose affiliation of the crystallographic societies in each country, with no permanent secretariat, and very little in the way of direct funding. Because crystallographic societies, such as those in Japan and Australia (and for that matter, the USA), encompassed the individual membership of all crystallographers in a country and had elected governing Councils (whereas the national committees are appointed), this model was also seen as a more democratic approach. It is well to keep in mind, however, that the debate on the 'best' model for the region was almost entirely between individuals and mostly within Australia and Japan. Both these countries already had national societies and national committees. A key discussion point became whether the regional association should represent the rank-and-file crystallographers (i.e. the national society) or the national academy, and this debate was national rather than international.

In addition to the vigorous discussions on the nature of the proposed association, other aspects of a regional grouping needed to be resolved before decisions on its formation could proceed. A [letter](#) (dated June 4 1980) from Prof Terry Sabine to Prof Ted Maslen, cited a communication from Prof Tang You-qi (dated May 17 1980) requesting that Taiwan be omitted from the list of nations eligible to be members of the regional group. This letter quoted Prof Tang's request, as:

“ You will perhaps still remember that I mentioned during our meeting in Madras that we will welcome crystallographers from Taiwan to join our Group only on the condition that they do not insist they are representatives of another China. You will perhaps also have noted that I repeated oh this point in my last letter to you after I came back from Madras. Taiwan is a province and an integral part of the People's Republic of China, so we do not consider it appropriate to list Taiwan as an independent country in this region, and wonder whether you would agree to delete it from the list in ITEM 6 (b) of the "Minutes of the India/Pacific Crystallographic Group". I hope you will kindly give this suggestion consideration and let us know your decision.”

Prof Maslen replied to Prof Sabine in a [letter](#) dated June 11 1980 saying that this was an important matter that he would discuss further with the SCA Executive, and that quite independently of issues on China's national boundaries, Taiwanese crystallographers should have an opportunity to participate in the activities of a regional group. It is of interest to note that the identification and recognition of the P.R. China and Taiwan would remain a matter of conjecture for the next two decades.

Following the earlier communications Prof Ted Maslen had made with Prof Kato, Dr Sandy Mathieson (CSIRO, Melbourne), a senior Australian crystallographer and longtime friend of Nobuo Kato, [wrote](#) to Prof Kato on October 30 1980 to emphasize the prevailing official and unofficial Australian views on the format of a regional group. In part, he said:

“ It was felt by the Australian crystallographers that, if an Asian regional group is to be established, it should be formed by an appropriate grouping of countries - for example, if Japan,

Australia, Pakistan, India and China constituted the outer limits of the group, then any country within such a defined area could become a member.

These viewpoints were heard by (or conveyed to) the members of the National Committee, who discussed this matter subsequently in close detail. The National Committee concluded that it was in agreement that the association should be regional and not encompass a major area of the world. With such a proviso, the Committee was strongly in favour that Australia should be a constituent member. In addition, the majority of the Committee felt that so far, the organization for the Asian Regional Association had been essentially ad hoc and that there was a need for the proposal to be placed on a more formal basis by the involvement of the appropriate body in each country (National Academy or Society, etc.) for the proper formulation of a suitable procedure for the setting up of such an Association.

Accordingly, the National Committee has written to the Council of the Australian Academy of Science requesting that such a procedure be followed and that the Executive Secretary of the Academy contact equivalent bodies in the various countries lying within the boundaries above.”

Based on available documentation, there then followed a two-year hiatus in the activities on the formation of a regional group. Of course this is simply a gap in our records – there are no written records on the group formation over the period from late 1980 to mid 1982.

In September 3 1982 Prof Ted Maslen [wrote](#) to the then SCA President, Prof Bryan Gatehouse, and reported on his recent visit to Japan where he had discussions with Profs Norio Kato and Jimpei Harada on the formation of a regional group. The main issues discussed there are captured by this part of his letter:

“. . . They are convinced of the merit of the Australian suggestions, but are having difficulty securing the support of their colleagues. The difficulties relate to two matters, namely,
(i) the close relationship which exists between scientists in Japan and the United States.
(ii) the diplomatic problems arising from the status, or lack of status of Taiwan.”

Ted then goes on to point out that little more could be done about the first matter, and then discusses various possible strategies to resolve the second. He concludes that:

“ The Japanese wish to set up the necessary machinery in association with the computing school which is to be held in Kyoto from August 18-27, 1983. The Japanese are most anxious that Australia be represented at that meeting. Harada and Kato are equally anxious that our representative be fully briefed, and gently persuasive on how to handle the Taiwan problem.

This is a question which you and Alec Moodie must resolve. If I can be of assistance by providing further information, please give me a ring. Australians currently planning to attend the school include Neil Isaacs and Syd Hall. I will probably attend also.”

On January 24 1983, SCA Secretary, Dr Rod Hill, wrote to Syd Hall at the University of Western Australia about the SCA Council meeting held earlier that month, and said:

“. . . the Council of the SCA has recently met to consider a number of matters, among which was the nomination of a spokesman for the SCA at the Kyoto computing school later this year (refer to enclosed letter from Ted Maslen). Council carried the following motion at that meeting:

‘That Dr S.R. Hall be asked to act as spokesman for the SCA in support of the formation of a South East Asia Regional Group of the I.U.Cr.’ ”

Dr Hall [replied](#) on February 8 1983 that he was prepared to do this, and since Prof Maslen would also be at the Kyoto computing school and was particularly familiar with past discussions, asked if he could also be involved in the discussions with the Japanese on the formation of a regional group. The SCA agreed to this request but emphasized that responsibility for reporting the Kyoto discussions to the SCA rested with him.

The IUCr International Summer School on Crystallographic Computing took place in Kyoto August 18-27 1983. There are no formal minutes of the meeting between Profs Harada, Maslen and Hall at the school, however an overview of these discussions is given in a [letter](#) (dated September 12 1983) that Prof Harada subsequently wrote to Dr Ting Fong Lai at the University of Hong Kong about the possibility of a future Asian regional conference there. Part of this letter reads:

“ During the International Summer School on Crystallographic Computing held from 18th to 27th August 1983 in Kyoto, Japan, Dr. E.N. Maslen, Dr. S.R. Hall (Australia) and I discussed informally about this matter. We agreed each other that some substantial activities are needed in order to put forward the idea of regional association, although such activities should be formally promoted through the National Academies of the related countries. As one of the activities it was considered to hold a regional small conference on some topics in crystallography in somewhere convenient place in East Asia. We also agreed to investigate until the next IUCr meeting in Hamburg whether it would be helpful or not to have such a regional small conference and how many attendances we may expect from regional countries. It was farther concluded that the best time would be at the 18 months after the IUCr meeting in Hamburg, that is the early 1986 and Hong Kong would be the best candidate place, because it is located geographically almost at the center of asian countries in addition to that the crystallographers in mainland China may be easy to attend.”

At the SCA annual conference CRYSTAL14 at Morpeth, New South Wales, Syd Hall reported on the Kyoto discussions at the SCA General Meeting. The relevant section of the AGM [minutes](#) read:

“ 6. Report on the Formation of a South East Asia Regional Group: Dr Hall began by asking Dr Moodie to summarize the background information leading up to the current discussions relating to the formation of the group. Dr Moodie then brought the matter up-to-date by indicating that the United States had agreed that it would be better to be a member of its own group, and that the proposal for member countries now related only to the region bounded by China, Japan, India, Australia and New Zealand. He concluded by saying that the SCA had now been invited by the National

Crystallography Committee to form a Regional Group if it so desired, but that the SCA should not enter into financial agreements on behalf of the Academy in so doing. The National Committee was to be kept informed of developments.

Dr Hall then took the floor and stated that the Japanese had appointed Prof. Harada as their spokesman in the Kyoto discussions. Prof. Harada indicated that if the SCA were to put forward a positive suggestion for the forming of the Group, then the Japanese would consider it strongly at the November meeting of the Crystallographic Society of Japan. Suggested forms of cooperation among the members of the group would involve the holding of joint meetings, say in Singapore, and the production of a newsletter containing informal and scientific information for exchange. Dr Hall suggested that a letter proposing the Regional Group should be sent from the SCA to Prof. Harada, Prof. Morimoto (President of the Crystallographic Society of Japan) and Prof. Hoshino (Chairman of the Science Council of Japan).

In answer to a question from Dr Sabine, Dr Hall replied that Prof Harada suggested that there was general consensus that US participation in the Group was unnecessary. In answer to a question from Dr Gatehouse, Dr Hall replied that China and Taiwan participation might not be a problem based on the level of cooperation at the recent Kyoto school. Following a question from Dr Mathieson, Dr Hall stated that notification of an SCA proposal to form a Regional Group should go to China and India simultaneously.”

The SCA Newsletter #7 (September 1983) [reported](#) the following statement from the Australian National Committee on behalf of the Academy of Science.

“(ii) The National Committee for Crystallography has invited the SCA to proceed with negotiations relating to the formation of a South East Asian Regional Group. This group will be composed of countries in the region bounded by China, Japan, India, Australia and New Zealand. It may not include the United States. The SCA will now send letters to the National Crystallographic Societies in the major countries of the region inviting them to participate in the proposed Group.”

On September 30 1983 Syd Hall wrote to the SCA Secretary, Rod Hill, and enclosed a draft of a [letter](#) to be sent to the regional group representatives of Japan, India and China. It read:

“ At the August 1-3 1983 Meeting of the Society for Crystallographers in Australia at Morpeth NSW it was resolved that the SCA initiate the formation of regional group for Asian crystallographic organizations. The Society now extends an invitation for the *<affiliated body>* to join with us in the formation of this group.

It is proposed that the group encompass the geographical region bounded by Japan, China, India, Australia and New Zealand. Membership would be open to the countries within that boundary. The principal purpose of the group will be to promote collaboration in crystallographic research. It is recognized that scientists in this region do not have access to facilities and

information comparable with those available in Europe and North America. The formation of an Asian Group would provide a means of increasing cooperation within the area, in the first instance through newsletters covering activities in this region, and later assisting in the organization of joint research programs. The possibility of holding regional scientific meetings will be investigated.

It is intended that the administrative aspects of the regional group be as simple as possible. It is envisaged that the Asian regional group act through the national organizations representing crystallographers (such as the Society for Crystallographers in Australia, or the Crystallographic Society of Japan) rather than the IUCr National Committees. Where a national organization does not exist the National Committee is the natural alternative. One possibility is that the secretariat comprise a member from each participating country with one member elected as Chairman, and this body be responsible for administering the group. As an interim measure the SCA proposes that each participating country nominate a person to act as a contact during the formative stages.

The SCA suggests that within the two years of the XIIIth IUCr Congress at Hamburg (i.e. late 1985 or early 1986) a scientific meeting of crystallographers from countries interested in the formation of an Asian Regional group be held at a central locality, such as Hong Kong or Singapore. At this meeting details of the structure of the Regional Group and its mandate could be formalized. It is proposed that a firm decision on this matter be made by appointed delegates at the Hamburg Congress.

We are contacting all organizations in the region and expect a favourable reply from the majority of countries. We realize that a formal response from you will require a meeting of your organization. In the meantime, we would welcome correspondence on this matter, and any suggestions you might have on the organization of this group.”

Thereafter the question on “when and where the first scientific conference of the Asian group should be held” became a key issue; this meeting being seen as the crucible test of whether such an organization was viable in the region. Indeed, if the first meeting were not a success, it was generally accepted that the long-term prospects of an Asian crystallography group were slim. On October 11 1983 Norio Kato [wrote](#) to Ted Maslen about his recent visit to China, and said:

“A week ago, I visited Beijing and had an opportunity to see Professor Tang You-Tin. We talked about the Asian Group of Crystallography. One point which I feel worthwhile to mention is that the Hongkong problem is rather delicate in China at the present moment. If you wish to have a conference there, it would be better for Prof. Tang to take an initiative to contact people in Hongkong. He said that he has a few whom he can contact with. Generally speaking, he also said that about 15 scientists may participate in such a meeting.”

Ted Maslen [replied](#) to Prof Kato on October 27 1983, and on the point of where the first regional group meeting should be held, he said:

“Of the five locations the two most hopeful are Hong Kong and

Singapore. We should therefore either resolve the difficulties associated with one of those two cities, or choose an alternative location within one of the major countries. If you decide on the latter I would prefer China, because it is central, and would benefit most from staging the meeting there. If you prefer Singapore, I suggest we ask Mehrotra (from Penang) to organise the meeting in Singapore. Alternatively we could persist with Hong Kong.

While I appreciate the Chinese sensitivity on the matter, I do not see this as a major difficulty. The location is after all, a concession to suit their convenience. If they do not like Hong Kong I feel we should put the onus on the Chinese to propose an alternative.”

However, the upper echelons of Australia's science administration could not be rushed. A [letter](#) from Syd Hall to Jimpei Harada on February 7 1984 reveals that the sending of invitations to national representatives to participate in the Hamburg meeting had been delayed. It states:

“ I am writing to apologise for the delay in sending you the proposal to form the Asian Crystallography Group - that we discussed in Kyoto. The Honorary Secretary of the SCA has only today informed me that the letter I drafted in September, for transmission to all potential members of the Regional group, has not yet been sent. He had apparently been awaiting a complete set of contact names and addresses to be supplied by the Australian Academy of Science!

Ted Maslen and I are most upset about this. There was a clear directive from the SCA General Assembly on August 30th, 1983 that the letter of invitation from the SCA should be sent to you, with copies to Professors Morimoto and Hoshino so as to arrive prior to your November meeting. Although I am not officially responsible for the execution of this directive, I did draft the invitation letter, and am therefore most concerned that the November deadline was not met. A copy of the September 30th letter accompanying the draft invitation is enclosed for your information. It is especially worrying that I found out only by chance when phoning the Secretary in Melbourne about another matter!

I have again stressed the urgency of this to the Secretary and you should receive a copy of the invitation shortly. Please accept our apologies for the inconvenience that this administrative error has caused you and your colleagues.”

This delay was also [reported](#) on by the SCA Secretary, Dr Rod Hill, at the SCA Council Meeting on February 22 1984 in the minutes:

“ Regional Group

Dr Hill gave a brief summary of the background to the formation of the Regional Group and of the problems which had been experienced in soliciting from the National Committee for Crystallography and the Australia Academy of Sciences a list of names and addresses of contact persons to whom the invitations were to be forwarded. Council noted that even after a delay of more than 3 months the addresses were incomplete and of no real use. Dr Hill undertook to attempt direct contact with the Academy to obtain a better set of addresses, and failing that, to use the Sub-Editors listed under

the appropriate countries in the Sixth Edition of the World Directory of Crystallographers. Several very minor amendments were then made to the letter of invitation drafted some months ago by Drs Hall and Maslen. It was then decided that two copies of the letter would be given to each Council member in order that they send copies to contacts of a more personal nature in the appropriate countries.”

Shortly after this meeting, a [letter](#) from the SCA Secretary (dated February 29 1984) invited Prof You-qi Tang on behalf of the then SCA President, Prof Terry Sabine, to meet at the Hamburg Congress to discuss the regional group. An equivalent letter was sent to all national delegates. The letter sent was the one drafted by Syd Hall on September 30 1983, differing only in the last paragraph, which read:

“ We are contacting all organizations in the region (and/or the person listed as the Sub-Editor for the particular country in the Sixth Edition of the World Directory of Crystallographers) and expect a favourable reply from the majority of countries. We realize that a formal response from you will require a meeting of your organization and we would therefore appreciate your forwarding this letter to the appropriate body. In the meantime, we would welcome correspondence on this matter, and any suggestions you might have on the organization of this group.”

On March 19 1984 Prof Jimpei Harada [wrote](#) to Syd Hall about the delay in distributing information about the Hamburg meeting, and said:

“ Thank you very much for your letter of 7th February 1984. After a while I have received a letter from Dr. R. J. Hill, Secretary of the Society of Crystallographers in Australia in which a proposal to form the Asian Crystallography Group is given.

Although I have explained our discussion in Kyoto in the council of the Crystallographic Society of Japan held in November 1983, any conclusion was not made especially, since we had not yet received the proposal from SCA in a written form. In the next council of CSJ which will be held in April 6, 1984 in Tokyo, I am sure that this subject will be discussed until we will have some conclusion. So, please understand such our time schedule. I will, of could give you any information as soon as I have.”

Syd [responded](#) on April 11 saying that the SCA proposals for Hamburg were on their way, as follows:

“ Thank you for your letter of March 19th concerning the possible formation of Asian Crystallography Group. I hope the belated proposal of the SCA has now reached you and you are able to proceed with local discussions on the merits of this proposal.

On the question of a suitable site for the first meeting of the Asian Group, Ted Maslen and I consider Singapore to be potentially the next best locality. It is central to all participants and has excellent facilities for meetings. The only difficulty is the lack of local support but this may be overcome by using Singapore Airlines who specialize in conference

organization. There is a strong SA office in Perth and we think that if this site were mutually acceptable to potential members of the Asian Group (after discussion in Hamburg), then all of the necessary arrangements for the venue and accommodation could be made in this way.

Hope this is of some assistance in your considerations.”

Following the 1984 annual general meeting of the Crystallographic Society of Japan (CSJ), Jimpei Harada wrote to Syd Hill again pointing out that there were still concerns about the form and the establishment of the regional group model proposed in the SCA letter of February 29 1984. Prof Harada's [letter](#), dated May 2 1984, read:

“ Thank you very much for your letter of 11th April 1984, concerning the possibility to hold the first meeting of the Asian group in Singapore. The idea sounds to me promising and encourages me also in promoting the idea of forming the Asian Group in Japan.

The proposal of SCA which I received from Dr. R. Hill was discussed in the last council of CSJ, In conclusion, CSJ agreed with the idea to have a discussion about the problem of forming regional group for Asian Crystallographic organization at Hamburg meeting. It means that CSJ is pleased to join also with the SCA activity to send an appeal of having such a discussion at Hamburg to the regional Asian Countries. And CSJ decided also to send at least the following three delegates to the discussion at Hamburg.

Professor S. Hoshino (Chairman of National Committee for Crystallography)

Professor S. Nagakura (President of Crystallographic Society of Japan in 1984, Department of Metallurgy, Tokyo Institute of Technology, Meguro-ku, Tokyo, Japan)

Professor J. Harada (Secretary for international problem of CSJ(1983-1984))

As you see from above conclusion, unfortunately, all of the proposals of SCA written in the letter of Dr. R. Hill were not accepted in the discussion of CSJ. The problem is still under discussion. This is the reason of the delay of my letter. I would like to mention to you that there has been rather an alternative proposal that the much more good relationship between two countries (Japan and Australia and also Japan and China for instance) should be established first. It was emphasised that this is the most important thing to do at this stage. The relationship was considered to be extended easily so as to include all the Asian Crystallographers.

Although it is not easy thing for me to summarize our critical discussion, I hope you understand the situation in Japan. If you have any questions please write to me.”

In the meantime, the considerable efforts of the SCA Secretary Rod Hill to contact representatives in each eligible country about the Hamburg meeting had not been that fruitful. The reader should be reminded that communications in the 1980's were entirely by post, and in this case involved mailing lists (from the IUCr World Directory) that were probably not up-to-date. Add to this the time required to have a response manually typed and then mailed by international post (sent sometimes by ship), the modern-day reader can start to understand the leisurely pace of mail before the internet, and also the need to set very long lead-times for responses to any communications!

Here is Rod Hill's report in the June 27 1984 [Minutes](#) of the June SCA Council meeting:

“ Item 10.

Rod Hill reported on the current status of the SE Asian Regional Group invitations. It was noted letters had been sent to a total of 21 people in 18 countries and that only 5 people had replied. Since the names of people to contact had eventually been chosen from the Sub-editors listed in the World Directory of Crystallographers it was uncertain how successful this approach had been in reaching the appropriate official bodies in each country.

Nevertheless, a follow-up letter had been sent out to those people who had not replied, reminding them of the fact that an attempt would be made to contact the appropriate delegates (if supplied) at Hamburg for further discussions. Individual letters had also been sent to the 5 who had responded to the initial invitation, thanking them for their response and again informing them that their nominated delegates would be contacted at Hamburg. Since that time replies had been received from a further 2 countries.

Rod Hill agreed to attempt to contact the delegates at Hamburg and Terry Sabine agreed to chair the meeting. Council approved the expenditure of up to \$50 from SCA funds for refreshments at this gathering.”

The 1984 Meeting in Hamburg

On August 13 1984 a meeting on the proposed formation of a south-east Asian crystallographic group was held in Room 10 of the Hamburg Plaza Hotel, with Prof Terry Sabine as Chair and Dr Rod Hill as recording Secretary. The [minutes](#) (dated October 22 1984) show that attendees were from Australia (10), China (3), Hong Kong (1), India (6), Japan (6) and Taiwan (1). Nine invited representatives sent their apologies. The items recorded in the meeting minutes are important because they provided, to a significant extent, a framework around which the regional group was later established. The relevant parts of the proceedings are:

“ Prof Sabine defined the purpose of the current meeting to be a discussion of the proposals put forward in a recent letter from the SCA circulated to all those countries in the South East Asian region with a Sub-Editor listed in the 1981 edition of the World Directory of Crystallographers.

In this letter the principal purpose of the proposed Regional Group was defined to be the promotion of "collaboration in crystallographic research and teaching ...in the first instance through newsletters covering activities in this region and later (by) assisting in the organization of Joint research programs ... Cand) ...regional scientific meetings. It was also suggested that 'the administrative aspects of the Regional Group be as simple as possible ... (and that it) ...act through the national organizations representing crystallographers ...rather than the IUCr National Committees, where they exist. It was proposed that a secretariat be set up comprising a member from each participating country with one member elected as Chairman, and (that) this body be responsible for administering the group.

The delegates from each of the countries present at the meeting were then invited to comment in turn on these proposals. A summary of their comments, reactions and suggestions is presented below:

- (i) All delegates expressed strong support for the formation of a South East Asian Regional Crystallographic Group of the kind proposed in the SCA letter and indicated that much will be gained from such an association.
- (ii) A number of delegates expressed concern over the level of finances which will be necessary for the operation of the Group.
- (iii) Most delegates wanted clarification of the means by which membership of the foundation executive/committee will be determined and the manner in which the responsibilities for running the Group will be distributed among the member nations.
- (iv) There was some discussion about the way in which a constitution for the Group will be drafted and approved.
- (v) Suggestions for the time intervals between meetings of the group ranged from one to three years.
- (vi) Concern was expressed from some countries about the manner in which information will be circulated to and from the Group in those cases where no Crystallographic Society or National Committee existed.

After considerable discussion, and allowing for the fact that the final agreed constitution may alter some of these conclusions, consensus was reached on all of the following points:

- (i) Each country will be represented in the Regional Group by a single person (plus an alternate) nominated by those present at the Hamburg discussion meeting. For those countries not present at the meeting, but who have sent their apologies, the representative will be the person nominated by mail or the original contact used in earlier correspondence. (A list of these primary and secondary representatives is given at the end of these minutes.)
- (ii) Correspondence from the Regional Group to a particular country will be through the nominated representatives whose responsibility it will then be to communicate with the crystallographers in the country via their appropriate society or National Committee.
- (iii) Since The Society of Crystallographers in Australia is the body which has issued the invitation to form the Group, it will be the responsibility of the SCA to draft a constitution and circulate it among the representatives of the other countries for approval.
- (iv) The Chairman and Secretary of the Group will initially come from the SCA, but future holders of these positions will be rotated among the member countries.
- (v) One of the most important initial functions of the Group will be the circulation of a newsletter among the member nations, with English as the primary language. Collaborative research programs and other proposals of a more ambitious nature will follow in due course.
- (vi) Executive positions in the Group will be honorary with the major items of expenditure arising only from costs associated with

the production and circulation of the newsletter. In any event, the costs will be minimal. (After the conclusion of the meeting the Japanese and Australian representatives agreed to collaborate on the production of the first newsletter.)

(vii) Initial correspondence with the national representatives will involve the circulation of the minutes of the Hamburg meeting, a list of the nominated representatives and a copy of the draft constitution for approval.

(viii) Attempts will be made to base the draft constitution on similar documents already in existence for other bodies, namely the European Crystallographic Association.

Prof Sabine then extended an invitation, on behalf of the SCA, for all those delegates present to adjourn to an outside patio area of the plaza Hotel for refreshments and further informal conversation.

The meeting was declared closed at 1810."

Following the Hamburg meeting the SCA Secretary Rod Hill [circulated](#) the Hamburg minutes, enclosing also a draft constitution based on that discussed in Madras. This enclosure prompted a [letter](#) from Dr Sandy Mathieson (dated November 21 1984) expressing concern that the constitution circulated was inappropriate, as it was clearly out of step with many of the objectives agreed to in Hamburg. Syd Hall had similar concerns and on the same day (November 21 1984) sent Rod Hill a new [draft](#) constitution that encompassed the main suggestions made at the Hamburg meeting. Two clauses in this draft, aimed at settling the issue on who was eligible to join the regional group, and what would be the membership costs. They were:

"3. Membership

(a) Membership will be open to those countries within the south-east asian region bounded by Japan, China, India, Australia and New Zealand."

and:

"6. Membership Dues

The membership dues of the Regional Group to be based on a per capita rate applied to the number of crystallographers listed in the IUCr World List of Crystallographers. The per capita rate to be set by the Executive at the triennial meeting."

On December 6 1984 The SCA Council met, and an item in their [minutes](#) reveals the discussions on the regional group, and the actions recommended:

"Item 9. SE Asian Regional Group.

Rod Hill indicated to Council that the draft minutes from the Hamburg meeting had been sent to Terry Sabine and Syd Hall for approval. Syd had requested the inclusion of information relating to the timetable for the drafting of the constitution. The amended minutes had then been sent to the contact people in the 12 Foundation Countries to the 10 Australians who were present at the Hamburg meeting and to all SCA Councillors.

Copies of a draft constitution arising from the Madras Regional Group meeting in 1980 were circulated to all Australians present at the Hamburg meeting, and to SCA Councillors with a request for comments and amendments. Replies were received only from Syd Hall, Sandy Mathieson and Ward

Robinson. To summarize, Syd submitted a shorter and simpler version than the Madras draft, noting that it should be a relatively loose document which outlines the reason for the group and which does not include a large budget for travel expenses of the Executive. Sandy's contribution was very critical of the Secretary's action in circulating the Madras document primarily because of its references to the inclusion of the USA and suggestions of a large budget, and strongly recommended the use of the word "Association" rather than "Group". Ward, speaking on behalf of the small number of New Zealand crystallographers was strongly opposed to the concept of large financial contributions to cover travel expenses of the Executive and recommended that affiliation with the IUCr should be sought early on in the formation process. Details of these three contributions are available from the Secretary on request.

Council noted all of these comments and produced a new draft, based on the Madras version and the copy submitted by Syd Hall. The new draft is appended to these minutes including a map of the SE Asian Region. It was resolved to send the new version to Syd and Terry for approval and to make it available for viewing at the Crystal 15 meeting in Adelaide.”

Between December 1984 and May 1985, Syd Hall and Rod Hill exchanged a series of communications on the drafting a new constitution for the regional association. There remained, however, indecision on the contentious issue of funding the travel of Executive members. The [minutes](#) of the SCA Council meeting on May 14 1985 state:

“ 9. Report on progress with the organisation of the South East Asian Regional Crystallographic Association:

Background information on the drafting of the Constitution for the SE Asian Regional Crystallographic Association had been provided in the SCA Newsletter and a copy of this draft Constitution was included with the Crystal XV registration papers.

Syd Hall raised an objection to item 4(g) in the draft relating to the proposal that meetings of the Executive of the Association would be financed by the Association itself. After considerable discussion Council remained in disagreement over this matter and therefore resolved to put the question before the membership at the Business meeting.”

The SCA business meeting the following day debated aspects of the draft Asian Association constitution and voted to remove clause 4(g) on the funding of Executive. On May 26 1985 a draft (referred to as *Version 4*) of the [constitution](#) for the “*South-East Asian Crystallographic Association*” was sent by the SCA Secretary to all national representatives for comment and amendment.

Providing a newsletter for distribution to crystallographers in the region was one of the principal objectives agreed to in Hamburg. On August 27 1985, the SCA Secretary Rod Hill [wrote](#) to Prof Jimpei Harada about a newsletter being jointly compiled within Japan and Australia. This was to be circulated to all national representatives, who would then copy it onto all crystallographers in their country. Rod's letter was accompanied by a welcoming statement from the SCA President Prof Hall, and included an invitation for the CSJ President Prof Y. Iitaka to provide an equivalent introduction.

Rod Hill's letter read:

“ Please find enclosed a new copy of your contribution for the first South East Asian Regional Crystallographic Association newsletter. I have made a few small amendments to polish up the English, and have added an approximately equal amount of material concerning the Australian scene. I hope that you will feel free to amend or delete any of my additional material if you do not think that it is appropriate.

You will also see that I have included a few "editorial" remarks from the two of us - please also change this section as you see fit. In addition, Syd Hall has included a short message to the readers as an introduction to the newsletter. Syd has specifically asked me to pass on his invitation to Professor Iitaka to contribute a similar message on behalf of the Crystallographic Society of Japan, or to add his name and that of the CSJ to the bottom of the present message.

It is my understanding from our discussions in Hamburg last year that you very generously offered to handle the final production (and circulation?) of the newsletter in Japan. If this is still the case then I do not think I need to see any further drafts unless, of course, you think I should. If you are now no longer able to produce the newsletter from Japan then please send the draft (with any amendments and additions) back to me and I will deal with it here.”

The Asian Crystallographic Association

A newsletter on crystallographic activities in the region, and elsewhere, had been put together jointly by Australia and Japan in July 1985. This was intended primarily to communicate the intention to form a regional group within Asia. Two editions of basically the same material were issued: one in [August 1985](#) edited by Syd Hall headed the '*Newsletter of the South-East Asian Regional Crystallographic Association*' and another in [December 1985](#) edited by Jimpei Harada labeled '*Newsletter to Asian Crystallographers*'. It is of interest to note that in the December version, the then CSJ President, Prof Y. Iitaka, referred to the regional group as "*The Asian Crystallographic Association*". This is the first use of this name, and though this must have involved communications between and within both countries, no records of these have been found. Hereafter, this became the name applied to future drafts of the constitution.

Considerable correspondence to the SCA Secretary and President on the formation of AsCA followed the distribution of the first newsletter. These included suggested [changes](#) to the constitution by Prof M.M. Qurashi on December 23 1985 and a [letter](#) (dated March 4 1986) from Prof Sadao Hoshino, the next CSJ President, explaining that a special committee had been formed to put forward suggestions on the draft constitution. This was followed with a [letter](#) (dated March 20 1986) from Prof Takuyuki Urugami informed the SCA Secretary that he had been appointed to the role of the Japanese spokesperson for AsCA matters, to replace Prof J. Harada. However, it was planned that Prof Harada visit Australia in April to discuss suggested changes to the constitution with Dr Rod Hill in Melbourne, and with Prof Syd Hall in Perth.

On April 7 1986 Jimpei Harada [wrote](#) to SCA Secretary about his Australian itinerary and enclosed a quite extensive set of suggested changes to the constitution. This was quickly followed on April 17 by another [letter](#) with a revised set of changes dated April 1. Several of these are of special significance to the finally adopted constitution; they are:

“Title draft
changed to :
‘ASIAN CRYSTALLOGRAPHIC ASSOCIATION DRAFT CONSTITUTION’ ”

and:

“e. Article 4. Council and Executive. (a)
changed to :
‘The association shall be administered by a Council consisting of
member from each member country. The number of councilors from a
country shall be in accordance with its category, as follows:
Category I II III
Number of Councilors 1 1 2
The councilors are to be appointed by the national
crystallographic society of that country, or ...’ ”

and:

“i. Article 5. Finances.:
changed to :
‘The finances of the Association consist of:
(a) membership dues in accordance with the category, as follows:
Category I II III
Number of unit contributions 0 1 3
(b) gifts received by the Association with permission of the
Executive committee.’ ”

The first change formalized the name of the regional group to what it is known as today. The other two changes refer to the council voting rights and membership fees. They represent a considerable improvement over the previous clause in which fees were proportional to enrolments in the World List of Crystallographers – which certainly would have been complicated to administer. With only small modifications these changes became part of a constitution that would be ratified at the 1987 Perth Congress.

In mid-May 1986 Jimpei Harada visited Australia. On his return to Japan, Syd Hall [wrote](#) to him on May 26 1986 and summarized the most important aspects of their discussions.

“ I have discussed with Rod Hill the constitutional changes that we talked of here, and he will prepare another draft for circulation based largely on the proposals of the CSJ. This should reach you for consideration at your August meeting. I have looked carefully at the budget estimates you gave me prior to your departure. I will of course discuss them with other members of council (recognising of course that they are only rough estimates) but have some brief comments on each.

(i) I mentioned to you here that the SCA has discussed and does not favour a budget allocation for travel of the Executive. The Executive and Council are expected to meet at the IUCr Congress and we favour that each member is responsible for his own travel expenses.

(ii) The estimates of printing costs for the news letters are close to what we discussed. I think that your estimate of postage (or airfreight) of the bundles of newsletters to each country may be a little high.

You also mentioned to me that the CSJ may offer to subsidize certain aspects of the newsletter preparation. Would it be

possible to write me about this?

I think that the number of <member> unit contributions should exceed 10, and might be closer to 12-14. This, with exclusion of travel funds, should bring the overall budget to a level where the individual contribution of each SCA member is acceptable.”

On June 9 1986 Syd wrote to the SCA Secretary Rod Hill requesting the distribution of the latest draft of the [constitution](#) (Version 5) incorporating changes principally put forward by the Japanese committee, along with some revisions agreed to during the visit of Jimpei Harada to Australia. Rod sent these out on June 11 with the request:

“ Please circulate the draft as widely as necessary for constructive discussion within your country. We would like to have your suggestions and comments on the draft before the end of this year. Our plan is then to send you in early 1987 a final draft for discussion at the IUCr Congress in Perth and it is hoped that this will require little or no change before formal ratification. We therefore urge you to consider all aspects of the enclosed draft carefully and thus simplify the first meeting of our new Association in Perth.”

It is important to note that the membership and financial clauses in this draft now read:

“ 4. Council and Executive

The Association shall be administered by a Council consisting of one member from each member country. Each member shall have voting power in accordance with the membership category of the country of origin, as follows:

Category	I	II	III
Number of votes	0	1	2 ”

and:

“ 5. Finances

The finances of the Association shall consist of:

(a) membership dues for each country *in* accordance with its category, as follows:

Category	I	II	III
Number of unit contributions	0	1	2 ”

The intention of these clauses is to allow some eligible nations to join the Association without a membership fee, however, as a Category I member they would be precluded from voting on matters involving the expenditure of funds. There will be further discussion about these matters before the constitution is ratified, and in fact Prof Takuyuki Uragami [wrote](#) to Prof Hall on November 29, on behalf of the CSJ, with some additional rewordings and adjustments to these clauses. Prof Uragami also asked to be informed of comments coming from other countries on the constitutional matters that the Japanese sought to be adjusted. However, at this stage, there appears to have been little feedback - Japan and Australia being the countries most concerned on how the Association should be structured.

Preparations for the Perth Meeting

The absence of any substantive communication from P.R. China at this stage of the planning was of some concern, and on February 5 1987 Syd Hall [faxed](#) the IUCr Executive Secretary Dr Jim King the following:

“ I HAVE SOME QUESTIONS ABOUT THE PROPOSED ASIAN CRYST ASSN TO BE

DISCUSSED IN AUGUST.

- 1) DID YOU RECEIVE THE DRAFT ASCA CONSTITUTION?
- 2) DID YOU HAVE A CHANCE TO DISCUSS IT IN BEIJING?
- 3) WHAT WAS THE REACTION?
- 4) WHO SHOULD WE CONTACT IN CHINA PRIOR TO AUGUST?
- 5) WHAT PROCEDURE DO WE FOLLOW TO AFFILIATE THE ASCA WITH THE IUCR?"

On February 9 1987 Dr King responded to this fax, as follows:

" Many thanks for your Telex received on 6 February concerning the proposed Asian Crystallographic Association which will be discussed at the Perth Congress.

Yes I did receive the draft ASCA constitution which you sent via Maureen MacKay. I had little chance to discuss it with the Chinese crystallographers in Beijing, because they were so busy with the meeting. However, what little discussion I did have did indicate that it would receive a favourable reception in the Chinese quarters. I would suggest the best people to contact in China about it at present would be Tang You-qi, since he is the Chinese member on the IUCr Executive Committee, and Xu Xiao-jie, who is Secretary of their National Committee for Crystallography and also the sub-editor for China for the Seventh Edition of the World Directory of Crystallographers. They are both at the same address, The Institute of Physical Chemistry, Peking University, Beijing, People's Republic of China. Dr. Xu is a very intense and conscientious person, and is a lecturer in Tang's department.'

Dr King went on to give valuable advice on ratifying a newly formed regional association:

" Assuming that the ASCA does get off the ground, I would expect the IUCr Executive Committee to encourage the ASCA to affiliate with the Union as a Regional Associate. There is little precedent for this, the only predecessor being the European Crystallographic Committee. In fact it was the wish to involve the ECC in the Union's affairs which encouraged the formation of the category of Regional Associate. I enclose a copy the IUCr Statutes and By-laws. You will see that Statute 1.1(i') includes 'association with Regional Organisations of Crystallographers' as being one of the objects of the Union. Statute 5.11(f) gives the General Assembly the power to accept Regional Associates to determine the nature of the Association in each case and to determine any mutual financial commitment (this has been zero to date). Reference to Regional Associates occurs at other points in our rules (e.g. By-Law 1.4), but things have been intentionally left vague because the Executive Committee had no idea of predicting what bodies might wish in the future to become Regional Associates, and did not wish to preclude such association by unnecessarily rigid rules. I enclose a copy of the paper presented for the application of the ECC to become a Regional Associate as the only other guiding advice I can give. Formally proposals to be included in the General Assembly Agenda should reach the General Secretary by 13 April. I presume that this will not be possible in the present case. However, whenever the ASCA really gets off the

ground I am sure that it will receive an enthusiastic welcome from the Union. The way to do it initially is to write to the Union's General Secretary, or myself, and we will put the proposal before the Executive Committee and then it will go to the General Assembly.”

The 1987 Congress was now fast approaching for those in Perth and on February 15 1987 Syd Hall sent the SCA Secretary Rod Hill a new draft of the [constitution](#) (*Version 6*) to be considered for ratification in August. Probably the only substantive difference with Version 5 was the rewording of the membership clause:

“(a) The Association shall be administered by a Council consisting of Councillors from each member country. The number of Councillors from a country and the voting power given to each Councillor shall be in accordance with the membership category, as follows,

Category	I	II	III
Number of Councillors	1	1	2
Total number of votes	0	1	2 ”

This change was intended to clarify the issue of the number of Council representatives versus their voting rights. As the next 25 years of AsCA’s records show, the provision of scaled voting would be of minor importance because almost all decisions in the AsCA Council are reached by consensus. There seems to have been virtually no instances where votes has been called for, and recorded. The version 6 [constitution](#), along with the [agenda](#) for the August 14 meeting, was distributed to the representatives of all eligible countries in the Asian region on April 2 1987. It was accompanied with a [letter](#) from Syd Hall, as SCA President, that summarized the steps needed to taken in Perth to formalize the AsCA, and have it ratified by the IUCr. The main points of this letter were:

“ The informal meeting of Asian crystallographers at the Hamburg Congress decided that there was sufficient interest to explore the formation of a regional association. The meeting resolved that the Australian representatives circulate a draft Constitution to be used as a basis for discussion at the 1987 Perth Congress. The latest draft is enclosed, along with a proposed Agenda for a meeting in Perth.

The enclosed constitution is the result of several rounds of draft revisions by representatives of countries in the Asian region. I hope that it will be possible for you, and the executive of your association, to examine this draft prior to our meeting in August so that the Constitution can be ratified at this meeting. This step is essential to the formation of our regional association. The additional requirements are described in the Constitution. It is hoped that these formalities can be completed in Perth rather than waiting until 1990.

The representative body of each interested country or region should prepare for the Perth meeting in the following way.

1. Authorise a representative attending the meeting to vote on the formation of the regional association, and on the adoption of the Constitution.
2. If the Constitution is approved, authorise the representative to indicate in which membership category (I, II or III) your country will join the association.

It is probable that countries with a large crystallographic community (such as Japan) will join as category III members, while smaller countries or regions (such as Malaysia) may wish to become category I members.

3. Nominate the number of delegates to the Council appropriate to the membership category (see Clause 4a of the Constitution).

4. Instruct the representative(s) as to an acceptable amount for the association membership dues in the 1987-1990 triennium (see Clause 5a concerning unit contributions).

As a basis for your discussions, a possible annual budget for the association is included below. It is emphasised that this is not a proposed budget, but one that is typical of a low-overhead organisation of this type.

Executive costs (typing, stationary & postage) A\$500

Association Newsletter

A\$500 per issue of 1000 copies (publication & postage)

Assuming three issues per annum A\$1500 per annum

Possible budget

A\$2000 per annum

If total number of unit contributions is 10 the unit contribution will be A\$200 per annum

I draw your attention to the enclosed Agenda, which itemizes the steps essential to ratification of the Constitution, and formation of a regional association. Suggestions for additional items for the Agenda are welcome, but must be sent to me in sufficient time for circulation. Additional matters can be raised under Other Business.

The acceptance of a Constitution, and appointment of the Representative Council and Executive, are necessary steps in the formation of our association. There is, however, another important question - namely, recognition by the IUCr.

The European Crystallographic Committee (ECC) is currently a Regional Associate of the IUCr. The provision for Regional Associates is covered in the JUCr's Statutes 1.1(i) and 5.11(f) and in by-law 1.4. I have had preliminary discussions with the IUCr Executive Secretary, Dr J.N. King, about affiliation and he believes that there will be no difficulties if we follow the ECC precedence. He recommends that we inform the Executive of our intentions as soon as possible, especially if this matter is to be raised at the XIVth General Assembly.

While it would be premature to place affiliation on the formal Agenda of the XIVth General Assembly in August, I will explore with him alternatives that may be open to us for obtaining IUCr ratification, if the formation of the association is completed at our first meeting."

However, the IUCr ratification of AsCA, if its formation was agreed to at the August 14 meeting, posed a particular timing issue because the formal agenda of the IUCr General Assembly had been published. The only possible juncture that the AsCA ratification could be considered in Perth would be the Third Session of the General Assembly on August 18. On June 22 1987 Syd Hall [wrote](#) to the IUCr General Secretary, Prof Kurki-Suonio, alerting him to the possibility that a

request for ratification as a Regional Associate might be sent to the General Assembly for consideration at relatively short notice. No reply is recorded but the timing issues of the application were obviously discussed with Prof Kurki-Suonio in Perth.

The Birth of AsCA (August 14 1987)

The meeting to establish AsCA as a formal organization took place at 1400h on August 14 1987 at the Perth IUCr Congress, University of Western Australia. Thirteen national entities were represented: Australia, China, Hong Kong, India, Japan, Korea, Malaysia, New Zealand, Pakistan, Philippines, Sri Lanka, Thailand and Taiwan. Details of this meeting are given in the AsCA newsletter ([No. 1 Vol. 1](#)) published in January 1988.

Prof Syd Hall chaired the meeting until the acceptance of the AsCA constitution, after which the first AsCA Executive was elected. The circulated constitution was passed unchanged, except for a modification to the voting rights of representatives. Namely:

“ (a) The Association shall be administered by a Council consisting of Councillors from each member country. The number of Councillors from a country and the voting power given to each Councillor shall be in accordance with the membership category, as follows,

Category	I	II	III
Number of Councillors	1	1	2
Total number of votes	1	2	4 ”

The elected AsCA Executive for 1987-90 was Prof S.R. Hall as President, Prof M.A. Viswamitra as Vice President and Prof J. Harada as Secretary/Treasurer. Each representative then submitted their membership intentions. They were Australia (Category III), China (II), Hong Kong (I), India (III), Japan (III), Korea (I), New Zealand (II), Pakistan (I), Philippines (I), Sri Lanka (I), Taiwan (II) and Thailand (I) – representing 9 fee-paying membership units.

The First AsCA Council Meeting (August 17 1987)

A meeting of the AsCA Council was held on August 17 when it decided that each membership unit would have an annual value of \$120 Australian dollars for the period 1987-90.

A photo of participants in this meeting follows.



ASCA Council pictured following their first meeting on August 17 1987.

From left, seated: M A Viswamitra (Vice President), Sydney Hall (President) and Jimpei Harada (Sec. Treasurer). Standing: Krishan Lal, Fang Ming Miao, Wyona Patalinghug, Abdul Hamid Othman, Sadao Hoshino, Peter Colman, A Q Khan, Graeme Gainsford, Richard Gunawardane, Ting-Fong Lai, Phathana Phavanantha, and Yu Wang.

The Ratification of AsCA as an IUCr Regional Affiliate (August 18 1987)

On August 18 1987 the newly formed Asian Crystallographic Association was nominated before the Third Session of the IUCr General Assembly as a Regional Associate. The minutes of this session, extracted from *Acta Crystallographica Section A, Volume A44, page 575* read:

“(35) Application of the Asian Crystallographic Association (ASCA) to become a Regional Associate

The President informed delegates that a new association, the Asian Crystallographic Association, had been formed on 17 August 1987 and that the Association had requested acceptance by the IUCr as a Regional Associate. He asked the General Assembly to agree to this request being added to the Agenda. The Assembly agreed.

The newly elected President of the Association, S.R. HALL (Australia) summarized the background leading to its formation. After some discussion on the region covered by the Association, the Assembly accepted it as Regional Associate of the Union.”

The discussion on this nomination at the General Assembly mostly concerned its geographical boundaries and in particular the presence of the countries Australia and New Zealand within a regional grouping identified as “Asian”. Syd Hall pointed out that crystallographers in these two countries already had close research and teaching ties with other countries in this region, and considered themselves to be part of this region. Moreover, if Australia and New Zealand were to have an opportunity to be part of any IUCr regional grouping, it must be with Asia, as the region of ‘Oceania’ was too small to be recognized. An assembly representative from Eastern Europe asked why the boundaries did not encompass the (then) USSR. Another representative pointed out that it was more logical that the USSR be a member of the European Crystallographic Association. The application for the ratification of AsCA as an IUCr Regional Associate was then passed.

AsCA History PART 3

Initial Goals: 1987-1993

The real history of AsCA, as an established organization, now begins - the chronology of AsCA's formation years can legitimately be considered it's *pre-history*.

From its inception the first, and the most practical, objective of AsCA was to provide good communications between crystallographers in the region. In today's Internet World it is hard to appreciate just how difficult this was in 1987 for researchers, teachers and students in some Asian countries to keep up to date with developments in the field, and to get details of (let alone attend!) crystallographic conferences. In addition, access to the primary literature, such as that in *Acta Crystallographic* journals, was often difficult and time-consuming because of poor library resources. In some localities literature access was simply impossible. There were also very real problems for some scientists to collect diffraction data, or to access computers for crystallographic calculations. The possibility of sharing equipment, which already existed for some members (e.g. Australians used Japanese synchrotrons, and diffraction data was being measured for Thai crystallographers), was another of AsCA's primary goals.

However, before anything else, there needed to be a concerted effort to connect crystallographers in the region.

Communications in the Region

It had already been established during the formation years of AsCA, that the circulation of newsletters describing crystallographic activities within and without Asia, was a workable and effective means of connecting crystallographers. The benefits of a newsletter were that it's contents could cover a wide variety of topics; it was informal and easy to read for scientists whose first language was not English; it was circulated at regular intervals, and it had set deadlines for including material to be published. It was also possible to reproduce newsletters cheaply.

PART 1 describes a newsletter prepared and distributed in 1985 to inform scientists in the region on the progress of forming an Association. Two editions of essentially the same newsletter were jointly prepared in Australia and Japan. One edition was issued in [August](#) from Australia and another in [December](#) from Japan.

Over the next six years newsletters were one of the main activities of AsCA. From a historical viewpoint, these newsletters are particularly important because they provide chronological snapshots of the activities and interests of the Association over a given period. And although newsletter content is inevitably filtered, abridged and made digestible, it still represents the most complete written record we have of what took place during the early years of AsCA.

A brief review the newsletters published between 1988 and 1993, highlighting some of the most interesting activities in the region, follows. These snippets are intended only to tantalize the reader into perusing the contents of the entire newsletter when they have time.

AsCA Newsletters 1987-93

The [Volume 1, No. 1 January 1988](#) newsletter was the first regional communication of the newly ratified Association. It contains a variety of news within and without the region but in particular a summary of the AsCA formation process, the establishment meeting in Perth, AsCA's ratification by the IUCr, the AsCA membership details by nation, and the adopted constitution.

The [Volume 1, No. 2 July 1988](#) newsletter reports the gift of 170,000 yen by the CSJ to the Association. There were also gives details on the IUCr Computing School at Flinders University in Adelaide in 1987; the South Asian Workshop on Data Storage, Retrieval and Dissemination, January 18-23 1988 at the University of Madras; and the UNESCO Workshop on the Systematic Identification of Natural Products, June 13-17 1988 in Bangi, Malaysia. There was also an announcement of an IUCr Summer Computing School at Tianjin Normal University to be held September 15-26, 1988.

The [Volume 1, No. 3 March 1989](#) newsletter contains quite extensive news on the recent CSJ conference in Osaka, November 7-9 1988 which had over 300 participants and 117 presented papers, and also on the IUCr Summer Computing School at Tianjin Normal University. There were details Australian plans to access synchrotron radiation sources, and to build a diffractometer with Japanese scientists at Tsukuba. There is also a range of news from national societies.

The [Volume 1, No. 4 October 1989](#) newsletter alerted representatives to next year's IUCr Congress in Bordeaux and the need to plan the agenda for the AsCA Council meeting to be held there. There was a report on the CRYSTAL 16 conference in Lorne, Victoria February 16-19 1989 and the SCA General meeting that was held there. The [Winter School](#) on the Crystallography of Natural Materials was announced for the Chulalongkorn University in Thailand, February 7-15 1990.

The [Volume 1, No. 5 June 1990](#) newsletter contained an editorial by the outgoing AsCA President Syd Hall whose term of office would finish in August. In part he stated that:

“ This triennium has been therefore quiet, but not without its more exciting moments! Our modest achievements in improving scientific communication in the region are but the first steps for our young organisation. The scope of AsCA activities are certain to increase as our financial and organisational resources improve. Indeed it is expected that AsCA will be able to announce important new activities following the Bordeaux IUCr meeting in August.”

One of the new activities was to be AsCA's first scientific conference in Singapore in November 1992. Other items in the newsletter included news of the IUCr Winter School in Bangkok, and details of meetings and members in the CSJ and SCA.

Of special interest in this edition was news of the Extraordinary IUCr General Assembly meeting held in London on December 19 1989 to vote on whether Beijing should be retained as the venue for the 1993 IUCr Congress (the vote was in favour of Beijing). A dispute on the venue had arisen because of the Tiananmen Square demonstrations in 1989. AsCA had lobbied in favour of Beijing retaining the congress on the grounds that the Asian location (the USA was the alternate venue) was much closer and less expensive for Association members. This stance by AsCA, as a representative organization, did in fact ruffle the feathers of some its member nations, especially those whose own national committees had decided to oppose Beijing as the 1993 congress site. But the AsCA's position on this matter was clear: it desired only to maximize access for it's members to this major conference venue, and it took no political position in the dispute.

The [Volume 2, No. 1 May 1991](#) newsletter reported (for minutes [see](#)) on the 1990 Bordeaux AsCA Council meeting and announced the new 1990-93 Executive, and representative countries. Of special importance was the announcement of the first AsCA Conference to be held at the University of Singapore on November 14-16 1992 – this was the 'important new activity' alluded to in the previous issue of the newsletter. (Details of this conference will be given later under separate heading.)

Editorial Note: the newsletter issue Volume 2, No. 2 has either been lost or never existed. Anyone with specific knowledge on this should contact the AsCA Secretary/Treasurer.

The [Volume 2, No. 3 October 1992](#) newsletter contained mostly information about the AsCA92 conference and its program. It gave details on the [agenda](#) of the AsCA Council meeting to be held at 19:00 Saturday, November 14 in the Room C at the Regional Language Centre, the same building as the AsCA'92 talks.

The [Volume 2, No. 4 November 1992](#) newsletter was special edition to mark the inaugural scientific conference AsCA92 in Singapore and was handed out there. It summarizes the short history of AsCA, its present constitution, and members of past and present Executives.

The [Volume 2, No. 5 August 1993](#) newsletter followed the Beijing IUCr Congress and contained details (for the minutes [see](#)) of the AsCA Council meeting at which Prof Ward Robinson (NZ) was elected President; Prof. Yu Wang (Taiwan) Vice-president; and Prof. Z. Zhang (China) Secretary-Treasurer. This edition also contains a detailed Report on the organization and execution of AsCA92 by Hiroo Hashizume and Syd Hall, that was intended as a guide to the organization of future AsCA meetings.

The 1990 AsCA Council Meeting in Bordeaux

The second AsCA Council meeting was held at the 1990 IUCr Congress in Bordeaux. The details of the AsCA Council meeting in Bordeaux, along with the [agenda](#), were circulated as:

“The AsCA Council will hold its first meeting at the IUCr Congress in Bordeaux at 1400h Sat. July 21 in the Malard meeting room. Councillors please check their letter boxes and the notice board for other AsCA announcements.”

The [minutes](#) of this meeting show that new 1990-93 AsCA Executive was Prof Nobutami Kasai as AsCA President, Prof Fang Ming Miao as Vice President and Prof Yu Wang as Secretary/Treasurer. Four new countries were admitted as members: Bangladesh (as Category I), Indonesia (I), Singapore (I) and Vietnam (I).

The top agenda item at the Council meeting was the location of AsCA's first scientific conference. As recorded above, this matter had been widely discussed prior to the meeting and Australian society SCA and Japanese society CSJ proposed that their annual conferences be combined and sited at the National University of Singapore in November 1992. The minutes read:

“ It was reported that J.W. White, President of Society of Crystallographers in Australia (SCA), and F. Maruroo, President of Crystallographic Society of Japan (CSJ), had agreed to have a Joint Meeting at a site between the two countries in 1992. The format of the meeting would be three days with two days being in weekend; no excursion. The time; Middle - End October, 1992. Probable location: Singapore; the budget: shared between Australia and Japan on a cost-recovery basis. It was proposed that this joint meeting be organised under the auspices of the AsCA. G. Desiraju pointed out that if the meeting was held in Singapore, not only Indian students but also local students would have the opportunity to attend. Probably 40 - 50 students from India could attend provided that student accommodation was available. He hoped that the meeting would be held in August instead of October. Academic calendars were then examined for the membership countries but there were difficulties in finding a suitable overlap because the region extended into North and South hemispheres. After considerable discussion the Council agreed that this joint

meeting should be promoted as the first AsCA meeting. The date should be fixed by the SCA and CSJ. It was suggested that the AsCA should ask the IUCr for travel funds for the first AsCA meeting.”

This was the “new activity” that Syd Hall had alluded to in his editorial in the Vol. 1 No. 5 Newsletter. Considerable discussion had already taken place about the local organization of this conference, and Dr Lip Lin Koh at the University of Singapore had agreed to be the local organizer.

1990-92: Preparing for the Singapore Meeting

The decision of the Japanese CSJ and Australian SCA to hold their annual scientific conferences together under the auspices of AsCA in Singapore was in many respects a bold one. It meant that Japanese annual meeting would now be held in another language and all the participants would have to present their papers in English - something that many had done at overseas conferences but now this applied to Japanese students as well. It was a courageous decision by the CSJ, and certainly some senior Japanese scientists were not convinced that it was the correct one. However, the CSJ [formed](#) a committee of Professors H. Hashizume, M. Matsuura, J. Harada, M. Tanaka and T. Uragami to promote the joint meeting and they persuaded others that in addition to assisting AsCA in its first conference, the experience for the younger crystallographers to present their work in English to a relatively small and friendly regional group of colleagues would be beneficial.

The Australians in the SCA were also not entirely convinced that holding their annual *Bush Crystallographers* CRYSTAL meeting overseas was a positive move. These meetings were considered the “teething ground” for students to give their first presentations, and the CRYSTAL meetings were often structured around this approach. Fortunately, the cost of flights to Singapore from many Australian cities was reasonable (for some participants it was cheaper than if the CRYSTAL meeting were held in Australia) and this trumped one of the arguments of the traditionalists opposing this loss of autonomy. In any case opponents to a joint meeting were few in number, and the SCA voted agreed to a combined CSJ/SCA/AsCA meeting.

Despite the majority support for the Singapore meeting in Japan and Australia, the message for AsCA92 organizers was clear “this meeting had better be a success, scientifically and socially, otherwise there will not be another one!”. With this in mind, the SCA invited Prof S.R. Hall to [visit](#) Japan in December 1990 to discuss and update the ‘*Interim Venue and Travel Recommendations*’ [document](#) that he had prepared dated November 9 1990. Enroute to Tokyo, Syd Hall spent two days in Singapore and toured the National University of Singapore facilities with Prof Lip Lin Koh. This fact-finding visit proved invaluable for the subsequent discussions in Japan.

Due of the multiple responsibilities for the AsCA92 meeting (AsCA, CSJ and SCA) it was decided form four organizing committees: the Local Organizing Committee chaired by Prof Lip Lin Koh; the CSJ OC chaired by Prof Hiroo Hashizume; the SCA OC chaired by Prof S.R. Hall, and the International OC chaired by the AsCA President Prof Nobutami Kasai. The International committee was the umbrella organization that had final responsibility for the finances and organization of the meeting.

One of the critical planning issues was the financial underpinning of the conference; AsCA at this stage had very few funds of its own. The Japanese and Australian societies agreed to underwrite the budget for the meeting, and to share any losses incurred. All profits would go to the AsCA account. As further support, the SCA Treasurer Dr Colin Kennard sent a cheque for Aus\$1000 to the AsCA account on November 13 1990. (The CSJ had contributed 170,000Yen to

the AsCA account in June 1988).

AsCA History PART 4

The Growth Years 1992-2012

Singapore AsCA92 Conference

The AsCA92 conference held at the National University of Singapore from November 13 to 16 1992 was the most auspicious step in the Association's short history. It was held only 5 years after its formation and proved to be an outstanding meeting, both scientifically and culturally.

The [report](#) on this meeting shows there were 320 attendees and 240 participants, 264 scientific presentations – 80% more than initially estimated. Participant representation across the region was excellent with 180 from Japan, 57 from Australia, 14 each from China, India and Taiwan, 12 from Singapore, another 13 from other regional members, and 10 from Europe.

The conference was a resounding success at all levels. The early concerns about possible language barriers proved quite unfounded - with some of the best talks at the conference being given by scientists whose first language was not English. Moreover the younger crystallographers appeared to relish the scientific and cultural interactions with students from other countries. The likelihood of future AsCA conferences was guaranteed!

The Chair of the International Program Committee Prof Ted Maslen reported that preparing the conference booklet involved a great deal of re-editing of the abstracts to provide consistency across the fonts and the single-abstract per page presentation.

AsCA Councillors at the Third Council Meeting, November 14, 1992, Singapore.



Front row: Ms Lai Lu-Hua (Observer, China), Prof. Sydney R. Hall (Australia), Prof. Nobutami Kasai (Japan, President), Prof. Yu Wang (Taiwan, Secretary-Treasurer), Prof. Lui Hui (China, Alternate for Prof. Miao Fan-Ming);
Second row: Dr. Phathana Phavanantha (Thailand), Prof. S. P. Sen Gupta (India), Prof. Lecong Dzuong (Vietnam), Prof. Altaf Hussain (Bangladesh), Dr. Anwar ul Haq (Pakistan), Prof. Jimpei Harada (Japan, Executive Member of IUCr), Prof. Richard Gunawardane (Sri Lanka);
Third row: Dr. Lip Lin Koh (Singapore), Dr. T. Richard Welberry (Australia, Alternate for Prof. John White), Prof. W. T. Robinson (New Zealand).

The extensive report on AsCA92, prepared with the aim of guiding the running of future AsCA conferences, is published in the [Volume 2, No. 5 August 1993](#) newsletter.

*Editors note: It is hoped that the conference **Program booklet for AsCA92**, currently only available in hardcopy, can be scanned and made accessible as a HTML document, as it provides a complete record of the papers presented and the abstracts.
 The same treatment is requested for the **Program booklets of the AsCA95, AsCA98 and AsCA01** – all excellent treatises of the proceedings of those conferences and, unless digitized, are likely to be lost from AsCA's records.*

Suggested HTML Structure for the History from 1993.....

Meetings of the Asian Crystallographic Association

Colour codes: Congresses, AsCA meetings, Joint meetings

1978-87	---	<i>the genesis of AsCA</i>	
1987	-	Perth IUCr	
1988			
1989			<i>Parts 1,2,3</i>
1990	-	Bordeaux IUCr	
1991			
1992	1	AsCA92+CSJ+SCA Singapore	
1993	-	Beijing IUCr	
1994			
1995	2	AsCA95 Bangkok	
1996	-	Seattle IUCr	
1997			
1998	3	AsCA98 Bangi	
1999	-	Glasgow IUCr	
2000			
2001	4	AsCA01 Bangalore	
2002	-	Geneva IUCr	
2003	5	AsCA03+SCANZ Broome	
2004	6	AsCA04 Hong Kong	
2005	-	Florence IUCr	
2006	7	AsCA06+CSJ Tsukuba	
2007	8	AsCA07 Taipei	
2008	-	Osaka IUCr	
2009	9	AsCA09+ChCA Beijing	
2010	10	AsCA10 Busan	
2011	-	Madrid IUCr	
2012	11	AsCA12+SCANZ Adelaide	
2013	12	AsCA13 Hong Kong	
2014	-	Montreal IUCr	
2015	13	AsCA15+ICA Kolkata	