not reflexive. We can test it using the *EQUIVREL* operator. Binary multiplication is one such counter-example.

```
      A  Transitive and Symmetric
      A  but not Reflexive:
            × EQUIVREL 0 1
0 1 1
```

If we define a function *NO* which always produces 0, we can find another counter example:

```
      ∇ Z←A NO B
[1]     Z←0
      ∇
        1 NO 1
0
        NO EQUIVREL ι10
0 1 1
```

The reflexive property ensures that every item is a member of some partition. In binary multiplication, 0 does not belong to any partition; while in the *NO* relation, no element belongs to any partition.

Trivial Partitions

The function *YES*, which always produces 1, is an equivalence relation:

```
      ∇ Z←A YES B
[1]     Z←1
      ∇
        1 YES 1
1
        YES EQUIVREL ι10
1 1 1
```

Note that "=" and *YES* form trivial partitions on a set *S*. While "=" produces the most partitions by assigning each element to a separate partition, *YES* produces a single partition, namely the set *S* itself.

Conclusion

One of the first topics introduced in a college algebra course is equivalence relations. APL2 is an excellent study tool because the user-defined operator has allowed us to examine many different relations using a single program. ∎

Stephen Mansour is an APL programmer at Security APL, Inc., and formerly at IBM. He has a B. A. in mathematics from Berkeley and an M. S. in Operations Research and Statistics from Union College.

Reference

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The SIGAPL Annual Report

Dick Bowman
SIGAPL Chairman
Dogon Research
2 Dean Gardens
London E17 3QP England
Tel: +44-81-520-6334
E-mail: bowman@apl.demon.co.uk

SIGAPL began the 1993/4 year with a substantially new Executive Committee, and the year has been characterised by the Committee becoming established and comfortable with the tasks in hand. A significant organisational change is that we have changed our discussion and decision-making process to one that is substantially electronic; so that instead of omnibus general meetings which set out to discuss everything and end up deciding on nothing we have shifted the bulk of routine discussion and administration of volunteer matters to e-mail. This has enabled us to change the style of physical meetings so that they are single-topic, and with adequate forward planning the discussions are more effective. The topics of meetings to date have been membership, projects and conferences.

This has helped us a great deal in establishing a way for SIGAPL to truly operate as an international group, and widens the base from which we can draw a volunteer pool. It is very important to us to establish an awareness amongst our actual and potential members that SIGAPL is an international group rather than a North Eastern USA group.

Publications

We are pleased to report that SIGAPL's Quote Quad newsletter is significantly improved. We have an editorial team (Ray Polivka and Jon McGrew) who have done an excellent job for us; not only is Quote Quad back onto the publishing schedule (and likely to remain that way), we will now be able to increase our page count from time to time—we hope you noticed that the June issue was 48 pages.

We are already seeing tangible benefits from this; the increased page count is paid for by advertising which we could not attract when Quote Quad was running months behind schedule. We believe that we are beginning to see an end to the membership haemmorrage of recent years. With authors now believing that their articles will be published, it begins to become easier for us to attract writers. The SIGAPL Executive Committee intends to build on this, we are thinking about changes to the format and frequency of Quote Quad, and ways in

which the content might evolve so that it becomes more attractive to the very large proportion of active APL users who are not currently members.

Conference Activity

APL93 was held in Toronto in August. Attendance was firm at around 300, but the main impression from APL93 was a pronounced revival of optimism about APL.

SIGAPL had a small degree of involvement in SAC94, but our thinking at present is that this will not extend into the future—we see too small an overlap between SIGAPL's interests and those of the majority of CSC attendees. We are thinking about new outreach initiatives. APL94 is well underway and will take place in Antwerp— continuing our tradition of alternating conferences between North America and the rest of the world. We are handling APL94 as an "in cooperation" event rather than having any financial committment. The nature of the APL business has changed a lot in the last 25 years, and we perceive the need for a conference to be changing as well. We anticipate that future APLxx conferences will place a much heavier emphasis on teaching people to use the mature technology that APL is rather than as a place to discuss research into what APL might become.

Projects

An ongoing project is the APL Software Exchange which centres around activity at the annual conference; we are attempting to transmute this into a continuous software library which would be much more widely distributable.

A more short-term project (being handled by Mike Kent, our Treasurer) is creation of an electronic directory of APL enthusiasts; this is already helping us reach many people who are not currently members. Up to now SIGAPL has not had a great deal of activity outside the newsletter and conferences; we want to change this and find ways in which SIGAPL can boost members' proposals from latency to actuality. Our objective has been to define a way of managing projects so that they are achieved within firm cost/time constraints, and to set up channels of communication which can turn individual efforts into team efforts.

Local Chapters

We continue to add new local chapters at a steady pace. In late 1993 the Rome/Italy ACM SIGAPL was formally chartered, and we are pleased to be able to welcome the Bay Area group back into the fold (they had dropped out not so much from lack of interest as an excess of ACM's forgetfullness). There have been enquiries from other individuals and groups.

Membership

Hopefully we are seeing signs that the membership decline of recent years is levelling off; this is reinforced by the optimism of APL93. We believe that as the word spreads about the rebirth of Quote Quad that we will see positive gains from these efforts. Something which we did a few years ago was to put a lot of effort into individual follow-up on membership (personal letters to lapsed members, welcome packs for new members and so forth). We believe it had a positive effect, but it was a major drain on volunteer resource. Our plan is to revive some of this programme, aiming to achieve much of the benefit but with less volunteer effort. We are presently conducting a survey (reaching both members and non-members), so that we may better focus our activities toward an increased membership.

Awards

The 1993 *Kenneth E. Iverson Award for Outstanding Contribution* was presented (at APL93) to Dr. James A. Brown, IBM's *APL Chief Architect*.

Internet Activities

We have begun to make blatant use of the comp.lang.apl Usenet newsgroup to publicise our SIGAPL activities and events worldwide. There are also ftp sites which hold significant APL material, and we are working on ways to make these more well-known to our membership. Something that concerns us about the flight to on-line activity is that access is by no means universal; this is already a constraint on us at Executive Committee level, and we do not wish to create a two-tier membership structure based on modem ownership.

ACM Headquarters

We see a very large proportion of our income swallowed up by ACM administration and it's hard to believe that it offers value for money. Our HQ Programme Directors have always been very prompt and helpful in their responses to our requests. But there is something lacking in the overall structure which they serve.

Overall

The general mood of both the SIGAPL Executive Board and the membership as a whole is far more positive than it has been for some time. We look forward to a strengthened newsletter, revitalised conferences and the confidence to undertake new ventures that we have not attempted before. ∎