

**FORMAL METHODS EUROPE**  
**Minutes of the 16th Meeting held at Logikkonsult, Stockholm, Sweden on**  
**28 June 1996**

**Present:** Göran Anger  
Andrew Butterfield  
Tim Denvir  
John Fitzgerald  
Marie-Claude Gaudel  
René Jacquart  
Cliff Jones  
Peter Gorm Larsen  
Peter Lucas (Chair)  
Jan Storbank Pedersen  
Kees Pronk  
Nico Plat  
Kari Systä

**Item 1: Welcome to Logikkonsult**

Peter Lucas thanked Göran Anger for kindly hosting the meeting.

**Item 2: Minutes of the 15th meeting**

These were accepted subject to corrections to the list of attendees (Andrew Butterfield, Jan Storbank Pedersen, Gottfried Egger were present) and to Action 15/1 (ETAPS, not ITAPS).

**Matters Arising**

**Action 10/5:** Provide a periodic report on FME to the Commission. Peter Lucas, Kees Pronk and Tim Denvir will put this in hand soon. **Outstanding PL, KP, TD**

**Action 12/9:** More suggestions and leads have been received for a Finnish representative and Peter Lucas agreed to explore these further. **Done PL**

**Action 13/3:** Peter Lucas to write to members of the committee who have not attended the last four meetings. Tim Denvir to derive the relevant list of members from the records of minutes. **Outstanding PL**

**Action 14/1:** Alejandro Moya to find out on what basis the hardware costs in the FMEInfRes proposal will be funded. **Done TD AM**

**Action 15/1:** Marie-Claude Gaudel to bring a discussion item to the next committee meeting regarding a link to ETAPS. **Done M-CG**

**Action 15/2:** René Jacquart, Peter Lucas and Dines Bjørner to hold discussions leading to a concrete proposal for a world congress at Toulouse in 1999. Report at the next FME Committee Meeting. **Done RJ PL DB**

**Action 15/3:** Jim Woodcock to complete a revision of the mailing database following the 1996 Symposium. **Outstanding JW**

**Action 15/4:** Peter Lucas to find a willing mailing list maintainer. **Done PL**

**Action 15/5:** Cliff Jones to obtain further information on the nominees for a Finnish representative.  
Done CBJ

### **Finnish Representative**

Peter Lucas welcomed Kari Systä from the Software Technology Laboratory at the Nokia Research Center in Tampere ([kari.systa@research.nokia.com](mailto:kari.systa@research.nokia.com)).

### **Mailing List Maintenance**

The FMEInfRes project is prepared to undertake some maintenance of the FME mailing list, while the project is in progress. Each country would be asked to examine and edit its representation on the list.

### **ETAPS**

Marie-Claude Gaudel completed Action 15/1 by describing this initiative to bring together a range of conferences on formal approaches to software development, including TAPSOFT (with FASE and CAAP), ESOP and Compiler Construction. The new name for the combined conference would be ETAPS: European conference on Theory and Practice of Software. It would be held annually in the Spring. The first ETAPS conference would take place in 1998 in Lisbon (30 March – 3 April). ETAPS is partly motivated by the view that there are too many conferences in formal approaches. The inclusion of the FME Symposium in ETAPS had been discussed, but the fact that the symposium is presently held every 18 months was noted. It was, however, possible for FME to join ETAPS, if desired, at a later stage. The contact for ETAPS is Don Sannella ([dts@dcs.ed.ac.uk](mailto:dts@dcs.ed.ac.uk)).

The committee discussed its relationship to ETAPS, but it was not resolved to join ETAPS for the time being. It was felt that FME should form an opinion on whether the symposium is serving the same purpose as ETAPS or a different one (e.g. in its relationship to industry).

### **Item 3: FME Financial Report**

Kees Pronk gave a brief financial report. A transfer of £200 had been effected to John Nicholls to support a social event at the next meeting of ISO Subcommittee 22 (discussed at the 15th Meeting under "Other business").

He noted that there were as yet no financial results from the Oxford Symposium. On past experience, this would normally take 6 months.

**Action 16/1:** Jim Woodcock to report on the financial position of FME'96 to Kees Pronk in the short term and to the committee by the next committee meeting.

### **Item 4: FME'97 Budget**

Peter Lucas presented the draft budget for the FME'97 Symposium in Graz.

It was assumed that there would be 85 paying attendees, 30% of whom would attend the tutorials. There would be about 50 free copies of the proceedings, with the rest available at the reduced cost. It was thought that it might be necessary to rent Unix workstations and PCs to support the tools demonstrations.

It was suggested that 85 might be a pessimistic estimate for attendees and that 100 paying participants was a reasonable figure.

Approximately 10kECU would be required in funding. Potential sponsors had not yet been approached. Peter Gorm Larsen referred to the Odense Symposium, which had enjoyed 5-10kECU in sponsorship,

concluding that the level of sponsorship required for Graz was not unrealistic, but might be high. He warned about the amount of work required to raise funding in this way.

Invited speakers at Oxford were given 2 nights accommodation and free registration. Airlines as potential sponsors for invited speakers or PC meeting costs were suggested. It was suggested that 1 transatlantic and 1 minimum-cost Japan-Europe air fare should be included.

It was suggested that PC costs (such as mailing) should be included. Banking costs (e.g. 5% for payment by credit card) should be accounted for. It was suggested that a charge could be made for tool exhibitors, and that a 5% contingency fund be included.

Peter Lucas invited further comments.

**Action 16/2:** All members to supply personal contact details of potential sponsors.

## **Items 5 & 6: FME'99: Arrangements and Financial Estimates**

René Jacquart reviewed the arguments for holding FME'99 in Toulouse, including the possible arrangement of the symposium concurrent with major technology fairs in the autumn of 1999.

The committee resolved to hold FME'99 in Toulouse. The main issues under discussion were the format, timing, scale and financing of the event.

### **Format**

It was noted that, even if the format of the event is unchanged from the normal symposium, a track on application of formal methods in high-technology industries such as aerospace should be included, to take advantage of the companies and institutions based around Toulouse.

### **Timing**

It was resolved that FME'99 would be held in the autumn of 1999, two years after the 1997 Symposium, in order to coincide with major technology fairs in Toulouse. The event will be locally organised by Dr. Jacquart's institution.

### **Scale and Finance**

The proposal by Dines Bjørner that FME'99 could be an event on a worldwide, rather than solely European, scale, was discussed.

Kees Pronk gave a presentation based on his discussions with Prof. Bjørner. He addressed organisation issues, pointing out that the committee could consider a low-cost or high-cost event depending on the use to be made of university accommodation or a congress center. He enumerated some groups with whom cooperation would be valuable in technical areas (LOTOS, Estelle, SDL, ...), or as sponsoring organisations (IFIP, ACM, IEEE, ...). He asked the committee to consider if it would like a fully integrated conference or a collection of co-located events. Finally, he considered the possibility of a two-level organisational structure with a top-level board coordinating the work of other committees based on the participating sub-conferences.

The presentation went on to review the costs of previous conferences and to look at the establishment of the organisation necessary to arrange a large-scale symposium ("FME Worldwide"), including start-up costs and legal and tax liabilities.

Some cost estimates were given for versions of the symposium of different sizes. The total costs were estimated as follows:

Participants	Costs (ECU)
75-150	64 655
100-300	125 845
150-450	180 820

FME's current assets are 35000 ECU.

In discussion, Cliff Jones stated that, if FME'99 was to be a large-scale event, he would like to see a more formal proposal, including a discussion of finance for the event. The next committee meeting should be arranged so that Dines Bjørner can be present. The proposal should include a suggested size for the event, a draft budget, a plan for financial underwriting and a technical profile (applications vs. academic contributions).

As guidance to the proposers, the committee felt that the event should have a title of the form *FME'99: appropriate subtitle*.

**Action 16/3:** Peter Lucas to coordinate the next meeting of the FME Committee with Dines Bjørner. An e-mail message should be sent to Prof. Bjørner, outlining the main issues requiring resolution.

## Items 7, 8 & 10: Address Database, Dissemination Activities and FME Activity Reports

### FMEInfRes

Tim Denvir reported on the FMEInfRes project. This had been running for almost six months. The main item of progress was the provision of web pages in the UK and Ireland to house Frequently-Asked Questions files, Bibliographies and applications and tools databases. He described the structure of the web facility: a single European Hub entry point with country-specific web pages.

**Action 16/4:** To offer national web-pages in response to templates supplied by the FMEInfRes partners: Peter Lucas (Austria), Peter Gorm Larsen (Denmark), Marie-Claude Gaudel (France), Kari Systä (Finland), Göran Anger (Sweden), Nico Plat (Netherlands), Tim Denvir to find a developer for the UK.

**Action 16/5:** Cliff Jones to incorporate a pointer from the FACJ web pages to the FME web pages.

The committee members were asked to browse the FMEInfRes web pages and comment to partners.

The FMEInfRes partners had intended to provide effort to support the FACS Europe Newsletter, but this was not an acceptable part of the proposal because the audience of the Newsletter was felt to be inappropriate (too academic and already "converted"). Instead, the project would produce its own newsletter. Members of the committee expressed dissatisfaction with the content of recent issues of the FACS Europe Newsletter. It was resolved that the FMEInfRes newsletter would become the main FME newsletter. It was noted that future funding of the FMEInfRes Newsletter will become an issue when the FMEInfRes project ends.

Tim Denvir warned the the FMEInfRes members will be soliciting contributions to the databases again in the near future.

### FMEIndSem

Peter Gorm Larsen summarised progress in FMEIndSem. The project had been approved and started on 15 June 1996. Seminar planning was to start soon. Nominations for a steering committee of three industrial experts from outside FME were being sought. Seminars would begin in the first quarter of 1997.

## **FMGuides**

Video footage from interviews at FME'96 were being edited to be made available as clips on the world-wide web, and for broadcast on The Computer Channel, including a round-table discussion.

## **FMEBestLib**

A submission was being made to include Jonathan Bowen's work into the FMEInfRes structure, forming a Formal Methods best Practice Library. Tim Denvir coordinated the proposal.

## **Item 9: Future Directions of FME**

Peter Lucas and Göran Anger reported on a meeting with Alejandro Moya. The following main points had been made:

- The FME Mission Statement was satisfactory, especially in stressing spreading information and promoting industrial take-up.
- The Commission has undertaken considerable expenditure in formal methods, but with only a very minor part going to FME. This spending is seen as an investment to achieve an industrial take-up of what is considered a "strong offer" from a technical viewpoint. However, there seems to be a weak take-up, which has already resulted in cuts in spending on formal methods projects.
- Some important players in the formal methods business who are not represented on the FME Committee, e.g. Verilog.
- The problem is on the demand side, and communication is major problem. The formal methods community must learn more about the potential user/customer domains technically and culturally in order to 'speak the language of the customer'.
- The Commission does not have a preferential policy towards formal methods, but it supports application experiments and dissemination projects. The FME committee can expect to be supported while it still develops these kinds of project.
- The need to focus on industrial take-up was clear. This has an organisational consequence for the FME committee. A group focussed entirely on the symposium would not enjoy the same support as a group focusing on the development of new projects to encourage industrial take-up.

## **Item 11: Next Meetings**

Covered in Item 5. The next meeting would be arranged in consultation with Dines Bjørner.

## **Item 12: Other Business**

**New members:** Suggestions were invited for a potential member from Verilog (Daniel Pilaud). Jonathan Bowen would be invited as an occasional visitor.

## **Technical Presentations**

Filip Widebäck from Logikkonsult gave a presentation on the patented decision procedure due to Stålmarch which forms the heart of Logikkonsult's verification platform.

Marie-Claude Gaudel presented her recent work on dynamic and black-box testing. A related survey paper is available in the TAPSOF'T'95 proceedings.

Martin Aronsson described recent work by Logikkonsult with the Volvo Car Corporation, based around a cruise control example.