Report on ACM Multimedia 2004

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Abstract

ACM Multimedia 2004 was held at Columbia University in October 2004. Overall we had a great conference program – very rich and diverse – and the highest number of attendees. We summarize our experiences for both the technical program and the local organization of the conference. While many details are specific to the conference, several broad themes are likely to be of use to other events.

1   TPC Meeting

The TPC meeting was preceded by a one-day workshop of the attending TPC members. "Given that travel expenses are not paid, the workshop before the meeting and a chance to socialise is an important incentive." It was suggested to reverse the order, as that would allow to finalize the program before the conclusion of the TPC meeting.

For those unable to make the TPC meeting, having speaker phones and outside lines is helpful.

> "I was extremely happy with the quality of reviews and the way 80% of the TPC members were involved in the selection process. With the way reviewing and selection works, it's extremely important to get the right people. A confidential performance review for next years' chairs would be good. Plus, I benefited enormously from having the previous year's track chair on my committee, and would involve them if at all possible."

2   Technical Program Components

> "We have to make sure is that the new trends, namely the semantic and arts oriented presentations — mainly applications — get larger presentation spaces."

It was also noted that multimedia standards, despite their practical importance, were almost completely absent from the program.

2.1   Tutorials

We polled SIG members on desirable tutorial topics to guide the selection process about six months prior to the conference. The tutorial chairs recommend that this be made a permanent feature.

T2	Digital Rights Management of Multimedia Content via Encryption and Watermarking	Full (Su)	19
T3	Understanding Media Semantics	Full (Su)	18
T6	Mobile User-Interface Design: For Work, Home and On the Way	Full (Mo)	12
T7	Machine Learning for Multimedia Applications	Full (Mo)	20
T8	Emerging Peer-to-Peer Technology: Fundamentals and Challenges	Full (Mo)	13
T9	Wireless multimedia transmission challenges, principles, and standards	Half (Mo)	19

> The survey for local people can be better. The money we paid to the speakers can be reduced slightly.

> We had a lot of tutorial proposals that were good but I think ended up with less than what we could have had - this meant there was less service to the community than possible and less income to the conference than maybe possible. Experience in communications conferences (SIGCOMM and Infocom) is that, while tutorial attendance is somewhat down, it is still a significant part of the economy of a conference in that discipline. My guess is that in multimedia, we probably lose out to professional multimedia events (entertainment, SIGGRAPH, movie, music, games) and the lack of academic funds in the area (whether NSF or DARPA). (J. Crowcroft)

During the ACM business meeting, proposals for alternative tutorial models were discussed. For example, conferences could try invited area survey talks instead, held during the conference, and make them part of conference registration. Such talks may last from one to three hours and could be part of a tutorial track. Speakers may not get compensated, but would get a paper into the proceedings or suitable tutorial-oriented magazine.

2.2 Keynote Address

Gordon Bell (Microsoft Research) gave the keynote address for the conference. Due to delays in speakers getting back to us, we had some difficulty getting a second keynote speaker and, in the end, went without it. Given how crowded the program was, this was probably a blessing in disguise.

In general, if more than one plenary speaker is to be found, finding keynote speakers should probably be delegated to a separate chair, as it requires continuous attention. It is also wise to do this six months or more prior to the conference because usually keynote speakers are very busy.

It has been suggested that keynotes given by more junior researchers, close to the research area, may be worth exploring, rather than simply going for the highest wattage name. With two keynotes, having an industry and academic speaker provides some balance.

2.3 Long Papers

The Call for Paper read:

> "Multimedia 2004 invites your participation in the premier annual multimedia conference, covering all aspects of multimedia computing: from underlying technologies to applications, theory to practice, and servers to networks to devices. We especially encourage introduction of novel media such as haptic, smell, sensors, animation, etc.

The technical program will consist of plenary sessions and talks with topics of interest in:

- Multimedia analysis, processing, and retrieval, including multimedia semantics, aesthetics, modeling, fusion, audio/video/multi-modal processing, multimedia content description and indexing, multimedia digital rights management (protection and attribution), content-based retrieval with emphasis on multiple and novel media.

- Multimedia networking and system support, including context-aware multimedia communications, Internet telephony, peer-to-peer streaming, audio/video streaming, multimedia content distribution, wireless multimedia, adaptive support for scalable media, Internet protocols, multimedia servers, operating systems, middleware and QoS.

- Multimedia tools, end-systems, and applications, including new UI metaphors, usable distributed collaboration, authoring, multi-modal interaction and integration, multimedia in e-learning, entertainment, personal media, assisted living, and virtual environments.

We particularly encourage submissions in new and emerging areas."

We received 331 full (long) papers, each of which was reviewed by three reviewers. The technical program committee met on June 19, 2004 in New York. The review process culminated in the acceptance of 55 papers: 30 in the Multimedia analysis, processing, and retrieval track (out of 166), 12 papers in the Multimedia networking and system support track (out of 82) and 13 papers in the Multimedia tools, end-systems, and applications track (out of 83).

2004 was the first year to accept anonymized submissions for *ACM Multimedia*. Many authors were not used to the practice and submitted unanonymized versions. The technical program chairs checked every paper and asked those authors with identification info on their paper to resubmit, but it took more than a week to get all the papers and they were assigned to reviewers late. Thus, the technical program chair needs to check for anonymity as soon as the deadline has passed and act quickly to inform the authors.

Similarly, many more authors got confused about which track to submit to, causing the three TPC chairs exchanged quite a few papers amongst them. The chairs need to read abstracts of all papers and detect problem papers early on.

> "I think we should not follow this path of double-blind review. It makes the authoring complicated and at the end most reviewers know who wrote the paper anyway (if not the author then they can guess the institution)." (F. Nack)

Still some papers fell through the cracks and only after reviewers had a very hard time with them, we found that they were out of scope of *ACM Multimedia*. The review form should explicitly ask whether the paper is believed to be in scope and reviewers should be encouraged to contact the TPC chair if they discover papers that are likely to fit better into a different track.

Most out-of-scope papers fall into the category of encoding techniques. In future ACM Multimedia conference, the call for papers and the TPC committee composition should make it explicit if papers that integrate media encodings and MAC layer protocols are within the scope or not.

> "It might be a good idea to provide a gratitude plate for the best reviewer. They have such a reward at ACM Hypertext and it seems that reviews improved." (F. Nack)

It has been suggested that the session chairs should provide more than just the name and title of the presentation. For example, they might provide an introduction to the session (e.g. five minutes) to establish context or connections between papers in the same session or the conference.

Track chairs should be provided with a list of tasks they are expected to perform, including due dates, as some may not be aware of all the post-TPC-meeting items that need to be taken care of.

Seven submitted papers were accompanied by video figures, out of which three were selected for presentation, as the others either belonged to papers that were not accepted or the quality was insufficient. Video figures are three-minute long videos that accompany a submitted paper. The video demonstrates aspects of the paper that cannot be sufficiently described by words or images such as processes. As they are so tightly linked to the paper it seems appropriate to show them during the paper presentation and not during the video demonstration session. However, the video demonstration committee does look at them, evaluate their "presentability" and provides feedback to the authors.

2.4   Online Submission System

We used the EDAS conference system to manage the papers and the reviews. It was generously provided to us free of charge for this year. It is an excellent system and can be used as a great tool for submission management and communication by the general chairs and various track chairs.There are many features that the track chairs should try to learn early on. This can make their work easier.

2.5   Short Papers (Poster Session)

The short paper track received a record number of 158 papers and selected 71 papers for the final program, based on the input of the two track chairs. In addition, five "art program" posters were included in the poster session. The short papers were presented in a poster session at Low Library on Tuesday night, accompanied by a reception.

We provided easels and 32 by 40 inch foam core boards for the posters. Posters were numbered and arranged by broad topic area (Multimedia Analysis, Processing and Retrieval; Multimedia Networking & Systems Support; Multimedia Tools, End-Systems, and Applications; Art).

Instead of borrowing easels, we simply bought easels and poster boards. We used Quartet QRT-29E easels, which fold into a small bundle using zip cords, at about $16/easel. Foam boards cost $84.95 for 25 sheets (FramersIsland.com).

2.6   Open-Source Competition

For the first time, the conference held an open-source competition, selecting two winners from ten entries.

> As co-chair of the Open Source Software Competition, the following observations and remarks pertain to that aspect of the 2004 ACM Multimedia conference. We received ten submissions of which two were chosen to be highlighted. In the future, I would suggest that the number of recipients be limited to one. I believe that doing so will further increase the prestige of the award and allow the organizers to attach a more significant monetary award. Furthermore, having only one recipient will put less pressure on the conference schedule. One idea would be to make the presentation abut the start of the demo session. As for the award, this year's $600 budget (which was split into two awards of $300)

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seemed more than adequate. Free registration for the presenter was also an important component of the award which should be maintained. Choosing the award recipients proved to be a significant challenge. The range of entries was quite wide and included everything from a straightforward implementation of a specific algorithm to complex, full-featured media players and development frameworks. We did not solicit external, written reviews and handled the evaluation between the two co-chairs more informally. This was probably a mistake as we did not have a very good way of justifying our choice to people whose entries were not selected. We had at least one author who complained about this process. For the future, a review form with specific evaluation criteria should be developed and external anonymous written reviews should be solicited. The open-source software competition seemed to be well received by the conference participants and at least 20 people attended the presentations made by this year's award recipients. Although not explicitly instructed to do so, both recipients incorporated examples and demonstrations into their presentations which was highly effective and should be strongly encouraged in the future. (K. Mayer-Patel)

I would like to add that I did, with one of my students, try to use some criteria for judging the different entries. We looked at the feature set, tried to estimate how much effort went into the project, how comprehensive the documentation was, and how novel and how usable each software was. Since the submissions were very different, each rating was unfortunately quite subjective. However, these may serve as starting points for a review form next year.

I also agree with Ketan that we should make it a requirement that the software be demonstrated as part of the presentation. Fortunately, this year both presenters did this even without a formal requirement. (R. Zimmermann)

As an alternative or addition, it was suggested to include a program component where peer-reviewed open-source software packages can be presented, possibly in a demo-session format.

2.7 Panels

The panel chair was very proactive this year and searched for panel moderators. This proved to be a difficult task so the panels chair ended up organizing both panels. It might be desirable for the panel chair to define panels and seek established researchers to moderate or co-moderate the panels in the future.

"Panels again proved to be a popular ingredient of the conference. Panels drew a lot of attendees from the other tracks, such as the doctoral symposium. It should be considered to make the panels plenary sessions." (Susanne Boll)

2.8 Doctoral Symposium

From the Call for Papers: "The Doctoral Symposium is an opportunity for students involved in the preparation of a PhD in any area of Multimedia to interactively discuss their research issues and ideas with senior researchers, receive constructive feedback from members of the research community and expose themselves as up and coming multimedia researchers. During the Doctoral Symposium, selected students will present their thesis topic, the work they have performed so far and the results that

they have obtained. They will also reveal the difficulties, problems and questions that they encounter in the continuation of their work and can ask for comments from the audience."

The doctoral symposium received 16 submissions, out of which the chairs selected five. Four people presented, since the fifth person was too unwell to attend the conference. Pl and Hari picked the committee (ten people, including the two chairs), using their research connections both in academia and industry — many members were members of the ACM MM 2004 TPC.

The symposium as a whole, went off well. We tried to ensure diversity in topics — content analysis, systems and applications, and we also tried to tailor the review process based on the SIGMM guidelines — i.e., we tried to determine, if this was core multimedia topic, or perhaps better suited to another community. This worked reasonably well. I would like to see in the future that the reviewers are asked to ensure that the students selected focus on multimedia foundations, as opposed to topics that deal with problems with a single media.

The main thing that ought to be done differently, is the scheduling - it would be great to see this on the second day, just before the conference dinner. Historically, the symposium has been held on the last day, with great success - I was there last year, and the room was packed. In ACM MM 2004, the symposium clashed with an (interesting!) panel, which was unfortunate. However, we still managed to find faculty and students who were willing participants. The one other thing that Pl and I discussed, but could not schedule in, was to have industry more involved in the symposium. I think we should present the symposium, as an opportunity for industry to meet the new multimedia researchers. Perhaps an industry panel would have been nice. (H. Sundaram)

2.9 Video Program

"The video program received 12 videos this year of which six were accepted. Most of those rejected were not of sufficient visual quality or the topic was not suitable. We had no vision video this year, but it seems that a number of people plan to submit one for next year. It would be wise to keep this section alive for at least another year."

"The video track went relatively smoothly and even if we did not have submissions for vision videos, I would keep it for next year and see what is coming. It is also not a real problem to have the papers accompanying the video demonstrations being part of the review system and the videos not. (We organised a site where reviewers could retrieve the videos from and that worked fine.)

- Double blind review does not work for the video track, as it requires too much work for the authors to reedit the video once being accepted. we had cases and nobody was happy about it.

- For next year I would suggest that people should only submit a link to their video submissions (video, paper and key frame). In that way every submission can be located in the general review system, which makes the review process more controllable.

- We have to explain better what the different categories are for. Especially the video figure does cause problems. This year the accepted video figures were not shown during the paper session as presenters thought that they will be played in the video

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demonstration session. That is not the idea though and thus that needs to be explained better.

- Something general to be considered: I think it would be great if every paper has to be accompanied by a video figure. Can we not make it mandatory?

- The communication between the program chairs and the video chair needs improvement. The program chairs were not aware which submitted papers had a video figure assigned and I had to search for the accepted papers to see which video figures needed to be rejected because the paper was.

- There are still problems with the mpeg-2 format. The various codecs make it difficult to come up with constant quality. It seems to be good to investigate particular good encoding/decoding software and suggest to submitters to use those.

- It might be a good idea to let the community decide which video should win the prize. As the last candidates are know well before the conference starts a simple voting system on the ACM MM video demonstration page should do it.

- Next year the video session needs a bigger room. It was so crowded that people had to sit on the floor, on tables or simply stand.

- It would be great if the videos could become part of the ACM DL. They form important resources and we need to be able to reference them as we are used to with papers. I am happy to help with this issue.

(F. Nack)

2.10 Arts Track

"The art track was the most interesting new aspect. The sessions were well attended and the question part in the sessions were interesting. This needs to be kept as the discussions were stimulating. " (F. Nack)

"The arts exhibition would work better if more integrated into the conference. This year the location was a bit unfortunate, close but off campus, not straight forward to find either, and thus a lot of participants might have not seen it. When I went there on Tuesday it was not that crowded - and lots of 'non-conference' visitors too (which is a good thing)." (F. Nack)

2.11 Poster Session

It has been proposed to have a session that introduces each poster in one slide. This is only likely to work if everyone is allowed a single physical transparency and electronic formats are outlawed, but having a single PowerPoint slide set for all talks, with plain (no background) slides may also work. There is no cable swapping. People just go up to the projector and drop down their transparency and speak for a minute. If the preview session is announced before hand, sometimes people come with a transparency that is machine-generated, but still no delays. And, depending on how it is announced, hand-drawn slides are considered acceptable, so the event is quick and informal.

2.12 One-Minute Madness

Following other conferences, John Kender organized a "one-minute madness" session lasting one hour during the Thursday lunch hour. This was a very popular session. Although people were too shy to present this year we heard that many people would be ready to participate next year.

John summarized his experiences:

"It appears that 'N-minute madness' is an increasingly popular part of several different conferences recently. I did a quick google to see if there were any experiences recorded about them by a former moderator so that I wouldn't repeat others' mistakes. I didn't find any guidelines on how to run them, but I did find that many people found them a valuable part of those other conferences.

This time was a first time for ACMMM, so I am not surprised most people held back. There will be more contributors next time, since they have now seen how it runs. I did a very light job of editing the submissions because we had so few. But in the future we probably won't allow submissions from the floor, and will probably reject some that are submitted on time.

I think the lunch hour slot is ideal. People are relaxed, and the format is relaxed.

I was involved with time-keeping and media-swapping, so I wasn't paying that much attention to the content, but I didn't get a 'late breaking news' flavor from about half of them. The novelty factor of the format, I think, made up for the rest. Next time, though, the format won't be novel and the submissions should be better.

I think what would help in the future is a set of rules that concentrate the minds of the participants more exactly:

1. slides must be submitted by the deadline.

2. slides must be a single PowerPoint slide without pop-ups;

3. slides should state the problem or issue being addressed;

4. slides should express a novel approach or viewpoint;

5. any slide that cannot be read alone as a self-contained contribution to science, engineering, or research philosophy will be rejected.

Maybe we can give a token prize to the best presentation. (A copy of this month's Mad Magazine?)

In general, I thought it went well. It was not too much work, either. I think it is a good way to break up the last day. It will probably become a permanent fixture of the schedule, by popular demand."

"I was not so sure about the one minutes madness. Though I liked the idea it seems that the community did not feel the urgent need to communicate in such a way. Might be that they have to get used to it - so should be given another try next year (perhaps no slides and just oral statements - more spontaneous)." (F. Nack)

"One-minute madness is quite good. But as we repeat this, I am not sure how "fresh" the ideas can be, as people know there WILL be one-minute madness in the conference." (Y. Rui)

2.13 Workshops

Workshop	Attendance
6th ACM SIGMM International Workshop on Multimedia Information Retrieval (MIR)	71
Next Generation Residential Broadband Challenges (NRBC)	14
2nd ACM International Workshop on Video Surveillance and Sensor Networks (VSSN)	37
Effective Telepresence (ETP)	26
Continuous Archival & Retrieval of Personal Experiences (CARPE)	40
Story Representation, Mechanism and Context (SRMC)	27

3 Submission Policy

The chairs of ACM MM'04 strongly recommend that ACM Multimedia and/or SIG MM establish a general policy for possible conflicts of interest, in particular as to who can submit papers. Tradition has it that general chairs cannot submit any paper, while technical program or track chairs cannot submit papers, posters or other items for consideration in their respective track or session. Technical program committee members generally can submit papers, but individual tracks, such as the art exhibition, may want to further restrict such submissions to avoid appearances of self-dealing.

Also, a standard policy on what counts as an original submission should be drafted. The policy drawn up by the IEEE Communications Society and used by IEEE Infocom might serve as a guide:

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http://www.ieee-infocom.org/2005/non-image_files/policy.html
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4 Proceedings

We published both paper proceedings and a CD-ROM. The CD-ROM contained both the main conference and the workshop proceedings. The proceedings and CD-ROM were published by Sheridan Printing, as most ACM conference proceedings are.

The proceeding chair is involved in various types of activities related to the proceedings publishing process, such as requesting, verifying, and process information from program chairs, workshop organizers, and authors; coordinating tasks among program chairs and our publisher; helping our general chairs with scheduling conference sessions and some other issues related to proceedings; answering questions and requests from authors and program chairs; working with our publisher on many aspects in proceedings content generation, page proof and front matter.

5 Publicity

We had a full page ad in Communications of the ACM two months before the long paper deadline. This is generally a good practice. It would be great if we can get a full page ad on the last page of CACM (February or March issue) next year.

We usually send out a mailing right after the conference with details of the conference, plus important dates for next years conference. About three months before the first submission deadline, the publicity chairs send out the full CFP. They then send a reminder at about six weeks and then another at two weeks and finally the deadline extension email at the deadline. Reminders are also sent about the other deadlines about four weeks before they occur. A link to the technical program is sent once it is finalized. Finally, a reminder is distributed about the conference about a month before it is to occur.

We sent the mailings to a list of about 4500 valid addresses that the publicity chair has accumulated over the years; ACM SIGMM members and approximately 20 newsgroups.

The publicity chair also sent mailings to the following mailing lists but only three or four total mailings: the DBWorld mailing list; the SMIL mailing list; the SIGCHI announcements list. In addition, we advertised on the IEEE TCCC (Technical Committee on Computer Communications) mailing list.

Mailings in Asia were sent to seminar@cse.cuhk.edu.hk, an email alias which will broadcast to all engineering departments in ALL universities in Hong Kong, The following are email aliases to universities and research labs in Taiwan eef@cc.ee.ntu.edu.tw, dept@cc.ee.ntu.edu.tw, comm@cc.ee.ntu.edu.tw, giee@cc.ee.ntu.edu.tw, dept@csie.ntu.edu.tw, csief@csie.ntu.edu.tw, eoe1@cc.ee.ntu.edu.tw. For Singapore, email alias for the two universities in Singapore. For China, the email broadcast was carried out by my system administrator who knows someone in China. Note that in China, email broadcast is considered a very sensitive matter.

6   Local Arrangements

6.1   Venue

ACM Multimedia 2004 was held in various locations at Columbia University, including the rooms below:

Room	Capacity
Lerner Hall 555	
Lerner Hall Cinema	
CEPSR, Davis Auditorium	
414 CEPSR	
CEPSR Interschool Laboratory	
Uris (Business School), 301	
Havemeyer (Chemistry) 309	

All these rooms had pre-installed video projectors and the larger rooms had built-in audio and other A/V equipment, greatly reducing the effort required. Being in a university also provided instant access to networks and various equipment, as well as the ability to stage equipment, proceedings and the like locally.

As a more intangible benefit, all conference hotels tend to look alike, so being at a university offers a more exciting surrounding. Throngs of students on the steps of Low Library and the ability to enjoy lunch in the grass beats sharing generic hotel hallways with random tourists.

The major drawback of the university setting were the long walks between Lerner and CEPSR, the locations for most of the events. However, this also ameliorated the condition of being stuck in an artificially-lit, window-less conference room all day. Coffee breaks had to be held in both locations.

If we had known about the higher attendance, we probably would have attempted to hold all events in one building, namely the Lerner Hall student center as the only building with enough large and small meeting rooms. However, while we were able to use CEPSR and other classrooms without fee (except for some clean-up fees), we had to pay for Lerner, discouraging the use while the financial condition of the conference was still unclear.

6.2 Timing

We started sessions at 8.30 am, which was considered early by some.

6.3 Lunch

We served lunch, either as box lunches or as a buffet, during the three main conference days. This was generally well received, as it allowed people to mix and mingle easily, without having to find restaurants. The campus environment offered lots of opportunities for eating outside or inside. On the last day, we could overlap lunch with the One-Minute Madness session.

6.4 Registration

This year, we applied a new policy for author registration. Every paper which had at least one non-student author had to register for a full conference fee, even if the attending author was a student. If all the authors are students then the authors could be registered at the student rate. The idea was to ensure that either more non-student authors would attend or that if students come, that the conference would not be hurt financially. It is unclear that the former was achieved; fortunately, the conference attendance ensured a healthy financial outcome. The decision was not popular with some attendees, with a number of complaints received. However, other conferences have had this policy for many years and the committee next year should decide if they want to make this a permanent policy.

> "Finally, I think the policy of making students pay full registration if they are first author and one of the additional authors is not a student, is the wrong way to go. It is hard enough for a student to get the paper accepted and get the funding from their organisation: why putting extra burden on them by forcing them to ask at a later stage for additional funding? I think students should be allowed to register as such, no matter what." (F. Nack)

A (color) printer is needed at the registration desk to print badges for on-site registrations and to replace mis-spelled or misplaced badges.

We used badge holders with a second pocket that held a short program. With up to four parallel sessions and a printed program of more than 50 pages, this quick reference guide was very helpful.

"The small overview schedules in the badge were great; maybe all pieces should be in the badge such that we do not have to pick the new one up from the hotel but can just change the pages could top this wonderful idea." (S. Boll)

"I liked the schedule attached to the name badge - that was so helpful." (F. Nack)

We marked badges with colored dots to represent the conference components (tutorials, workshops, main conference, social event), but did not actually check for these at the door. To deter creative painting, we replaced missing dots by stars.

We used different-colored large envelopes for attendees. Most attendees received a manilla envelope with their badge, receipt,

Registrants should be asked whether they would like to opt-in to have their email address included in future mailings about the conference. While "previous business relationship" arguments can probably be used to defend such use on legal grounds, ethically it seems more appropriate to ask for explicit consent.

Details on registration and related issues are in the Appendix D.

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6.5 Wireless Access and Computer Terminals

The conference site had wireless access in all meeting rooms and public-access computer terminals in two locations. Generally, this was considered a "must have".

6.6 Presentations

We discussed collecting presentations from attendees ahead of time to avoid the dreaded laptop-switch dead time. However, given the wide variety of platforms and presentation tools as well as the tendency of some authors to finish their presentation the night before, we decided that we could never get all presentations on one laptop and just let presenters use their own laptop. By encouraging the next speaker to connect during the question time for the previous speaker, the transition times were moderate, particularly since we had a generous 30 minutes for each long-paper presentation. Conferences with shorter presentations and fewer parallel events may want to consider collecting presentations via memory sticks.

6.7 Audio/Video Recording

We recorded plenary and selected non-paper sessions on digital video and MPEG-4, using a Canon GL-2 camera, Sunpak tripod and a Canopus TwinPact100 digital scan converter, feeding into a PC with firewire connection. Where possible, we attempt to directly intercept house audio for better audio quality.

   Set up was made more difficult by repeated room changes, leaving only minutes to get connected. Having a portable unit, centered around a laptop, pre-wired, would greatly speed up the set-up.

6.8 Social Event

The social event took place on Wednesday evening, on the Bateaux with a three-hour dinner cruise around lower Manhattan and the Statue of Liberty. Attendees said tat this was one fo the beset social events – maybe because of the chance to finally get away from the conference and enjoy the soaring skyline of Manhattan.

   We presented the best-paper awards and certificates of recognition during the social event. The boat had plasma display to connect a laptop to, as well as wireless microphones. A boat has the disadvantage that there is very likely no single spot which can be seen by all passengers, so that many could only hear, but not see, the winners and conference committee members. With a bit of planning, we could have used a video camera to simulcast the faces onto the screens.

6.9 Communications

We used FRS walkie-talkies to communicate between the registration desk and some of the key volunteers. This made it easier to quickly answer questions, as key volunteers often had to run around to various venues.

6.10 Sponsors

We had great support from the following sponsors: FXPAL, IBM, Telcordia Applied Research, Philips, CWI, Intel, Microsoft, Avaya Labs and Columbia University. They provided generous support of var-

ious prizes, student travel grants, interactive art program and the video program. This is a great supplement to the ACM Multimedia budget – this year it was about $25,000. The support was secured mostly by people on the organizing and program committees. It might be a good idea to have a "Sponsors liason" on the ACM MM organizing committe who would do this for years in a row because of continuity.

6.11 Assorted Suggestions

- All local arrangements people should carry cell phones, with a list of numbers distributed to everyone.

- Conference blog for adding comments to presentations or indicating last minute program changes.

- Upload area for pictures from the conference such that people can contribute their pictures easily.

- Creation of a small multimedia presentation or at least of a slide show of the highlights — maybe the conference should introduce the position of a multimedia presentation chair.

- Message board, both for paper messages and a web interface. A computer display in the registration area might show all the current messages, cycling through them.

- Each meeting room should have a laptop that cycles announcements in the session breaks.

- Check with other conferences for scheduling the conference dates and for scheduling the TPC meeting.

- The TPC meeting should be held before the workshop.

- It is generally a good idea to have a clear understanding of roles and responsibilities among the chairs and a defined communication structure.

7 Checklist

7.1 Six months+ before

- Run a full page ad in CACM

- Select and invite keynote speakers

- Agree on and announce submission policy for track chairs and organizing committee

- Discuss and agree on review procedures

- Start corresponding with potential sponsors

7.2 Six weeks before

- Finalize design of give-aways; initial order.

7.3 A month before

Typically, early registration closes a month before the conference.

- Order badge holders.

- Order give-aways.

- Order award certificates and plaques for organizing committee.

7.4 Two weeks before

- Finish printed conference program.

7.5 One week before

- Assemble attendee envelopes.

- Assemble conference bags with CD, proceedings, and other materials.

7.6 Two days before

- Last-minute registrations.

7.7 Night before

- Set up registration desk.

A Sources for Conference Materials

Item	Source	Ordered	Cost per item
Badge holders			
Lanyard			
Whistles	Tagsandchains.com	500	
LED flashlights	Tagsandchains.com	500	$ 2.08
Staff T-Shirts	Branders	60	$11.05
Conference T-Shirts	Branders	450	$ 5.33
Backpacks	Ebags.com	375	$16.39

B   Organizing Committee

General Program Chairs	Henning Schulzrinne, Columbia University
	Nevenka Dimitrova, Philips Research
Program Co-Chairs	Angela Sasse, UCL
	Sue Moon, KAIST
	Rainer Lienhart, U Augsburg
Tutorials Co-Chairs	Yong Rui, Microsoft
	Jon Crowcroft, Cambridge U
Video Program Chair	Frank Nack, CWI Amsterdam
Workshop Chairs	Chitra Dorai, IBM
	Tat-Seng Chua, NUS
Technical Demos Chairs	Michael Vernick, Avaya
	Jim Griffioen, U Kentucky
Interactive Art Program Chairs	Alejandro Jaimes, FujiXerox
	Pamela Jennings, CMU
Doctoral Symposium Chairs	Hari Sundaram, ASU
	Pal Halvorsen, U Oslo
Panel Chair	Susanne Boll, U Oldenburg
Poster Chairs	Svetha Venkatesh, Curtin U
	Brian Bailey, U Illinois U-C
Brave New Topics Chairs	Lynn Wilcox, FX Pal
	Dick Bulterman, CWI Amsterdam
Best Open-source Software Chairs	Ketan Mayer-Patel, UNC Chapel Hill
	Roger Zimmerman, USC
Publicity Chairs	Liming Chen, U Lyon
	John C.S. Lui, CUHK
	Michael Vernick, Avaya
Proceedings Chair	Dongge Li, Motorola Labs
Web Site	Lalitha Agnihotri, Philips Research
	Lira Nikolovska, MIT
Registration Chair	Andrew Miller, Columbia U
Treasurer	Ashutosh Dutta, Telcordia Applied Research
Local Organization Chairs	Belle Tseng, NEC Labs
	Weibin Zhao, Columbia U
Asia Liaison	HongJiang Zhang, Microsoft, China
Europe Liaison	Ralf Steinmetz, Darmstadt U, Germany
ACM SIGMM Chair	Ramesh Jain, Georgia Tech
	Larry Rowe, UC Berkeley

C   Conference Registration and Income

There were a total of 405 registrations for the main conferencee, consisting of 346 paid registrations and 59 unpaid volunteer, invited and exhibitor registrations. 523 registered overall, including those who only attended workshops or tutorials.

- Since one of the half day tutorials got cancelled, two people were allowed to switch to a full day tutorial at the half day tutorial price of $100, yielding a total of $8 * \$175 + 2 * \$100 = \$1600$.

D Registration

(Contributed by Andrew Miller, Registration Chair)

The databases that we set up worked fairly well. Ben Smith (bhs16@cs.columbia.edu) designed and implemented it and will have the most information regarding this area. We used PHP and mySQL to implement the system, running on an Apache web server, integrated into a larger data management system (MICE).

We stored attendee information separately from billing information, since the two are not always the same. It is often the case that a registration will be purchased with a credit card not owned by the person being registered, or one person may register himself along with several other people. Even when a registrant uses his own credit card, the billing address may be different from the registrant's mailing address. When we printed receipts, the payer's information was at the top of the invoice, and each attendee that was registered by that person was listed below. We were also able to merge multiple payments for a single attendee. This was fairly common since several people registered for the main conference and then later registered themselves again so as to add a tutorial or workshop. During the conference we also encountered the need to transfer items between attendees. This happened when a student and advisor were both supposed to attend, but one of them couldn't make it and they wanted to move registration items from the missing attendee to the present one, without having to charge a new credit card. We also made refunds easy to process. The database saved the transaction id and last 4 digits of the credit card for each transaction. Then when we wanted to refund an item, we simply deleted it and the system computed the appropriate refund and applied it to the transaction that originally purchased that item. The payment system, originally designed exclusively for credit card transactions, was enhanced to record money order, cash, and check transactions.

Unfortunately, the registration database should have been more closely tied to the paper submission database. This made it difficult to implement the policy that at least one person from each paper must have a full (non-student) registration or one student registration if there were only student authors. We had a "Paper #" field for each attendee, and most people filled this out, but not everyone. I received several excel spreadsheets of the accepted papers and authors from the proceedings chair, and when I received a full registration that corresponded to one or more papers, I deleted those lines in the spreadsheets. Then when the deadline for author registration approached, I copied remaining e-mail addresses from the spreadsheets and sent out warnings. If we also recorded in the database which attendee would be presenting each paper, we would have been able to easily check each day if the presenters have arrived, so we would be prepared for no-shows.

D.1 Payments

We used authorize.net to process credit card payments, which were the most common form of payment. We accepted MasterCard and Visa, but we never set up an American Express merchant account, which would have been nice. We didn't advertise other forms of payment since they were more of a hassle, but we also accepted international money orders, wire transfers, and even cash. One issue with wire transfers was that some people did not ensure that all transfer fees were paid by the sender. So

New York	85
California	52
Massachusetts	21
Pennsylvania	17
New Jersey	15
Illinois	10
Florida	8
Georgia	8
Washington	8
Arizona	7
Georgia	7
Texas	7
Maryland	5
North Carolina	5
Connecticut	4
Kentucky	4
Ohio	4
Indiana	3
Louisiana	3
Iowa	2
Michigan	2
Missouri	2
New Hampshire	2
Alabama	1
Colorado	1
Minnesota	1
Nevada	1
Rhode Island	1
South Carolina	1
Virginia	1
Wisconsin	1
unknown	7
Total	287

Table 1: ACM Multimedia 2004 registrations by United States state

United States	287
Japan	35
Singapore	25
Germany	19
South Korea	17
Canada	15
China	14
Netherlands	14
United Kingdom	13
France	10
Australia	8
Hong Kong	8
Switzerland	8
Italy	7
Finland	6
Norway	6
Ireland	5
Brazil	4
Taiwan	4
Spain	3
Sweden	2
Portugal	2
Slovenia	2
Austria	2
Belgium	1
Denmark	1
Greece	1
Guinea	1
Israel	1
Sri Lanka	1
Tunisia	1
Turkey	1
Unknown	1
Total	535

Table 2: ACM Multimedia 2004 registrations by country

we had to be able to enter partial payments into the system, and flag these attendees when we made up registration packets so they could pay the balance at registration.

As for the credit cards, they worked in most cases, but we should have put a description of the "security code" on the website, because many people didn't understand this and their transactions were denied. We also had unknown issues with some cards being declined without apparent reason. In many cases this appeared to be because the card holder's bank had rejected the transaction. Unfortunately, there is no easy way to find out why a particular bank rejects a transaction. This still hasn't been resolved, but we should discuss this more with Global Payments to make sure that there is nothing about the way our merchant account is setup that could trigger alarms with certain banks. Another problem that we should have addressed was that when transactions were declined, the money was pre-approved on the payer's credit card, and appeared as a charge, even though this money would never be settled to our account. I had to explain to a few people that these approvals would disappear within a week and their credit limit would return to normal. However, it seems that if a transaction is declined, they should still have access to that credit.

Some people don't trust online transactions, so we offered the option to fax the payment information in. When the user clicked the "FAX FORM" button, their registration was entered into the system, but their payment was marked as "Pending." When we received a fax, we entered their credit card information directly into the authorize.net virtual terminal or did a voice authorization in a few cases. Once we had a successful transaction ID, we could edit the database payment record with this information.

The fax button also turned out to be useful in a few of the cases of people who had trouble verifying their credit card. In a few cases we were able to process faxed credit cards that the online system rejected.

D.2   Attendee Registration Classes

The main registration page allowed people to register as an ACM-member, a non-member, or a student. Another page that was not directly linked to the main conference site allowed student volunteers to register without paying. Internally, we also had a few other attendee types. Art exhibitors were given free registration to the main conference, but did not receive proceedings or gifts. We also had a similar free pass class for people such as the press. All of the conference organizers were required to register and pay, but two people who helped out with the conference, but did not have the financial means to attend (those without institutional backing) were also given free pass registration. Then we also had an "Invited" class for the keynote speakers, and the open source software competition winners, that received a free full registration including all the gifts and the banquet.

D.3   Student Travel Grants

We advertised student travel grants on the conference website and had students write me and provide their organization and title of their paper. We had over 45 applications, and initially only 3 $500 grants, but we were able secure money for 14 more from the sponsors program. We chose students who were first authors and were giving oral presentations and a few authors that were coming from a long distance away. These were awarded at the conference, and the students were given certificates and Visa gift checks.

In the future we can recommend that the student travel grant application should be a standard form with questions including the type of contribution to the conference, institution, reason for seeking

student travel grant. It is foreseeable that this program will be even more popular in the future and we need a policy for eligibility.

D.4   Gifts

I worked with the graphic designer for the conference to come up with artwork for the conference backpacks, t-shirts, and the keychain whistles and flashlights. We ordered these about one month before the conference, but probably should have done it a week or two earlier so that things did not all arrive at the last minute. We ordered 375 backpacks for the main conference and had just enough. The corporate logos of the two main conference donors, IBM Research and FXPal, were included in the graphics for the bag. We ordered 450 conference t-shirts and 60 staff t-shirts, (20% Medium, 50% Large, 30% X-Large). We should have ordered small t-shirts and shifted many of the large ones to medium, because many of the attendees are much smaller than the current registration chair! We also ordered 500 whistles and 500 keychain LED flashlights.

In the future we can also recommend working with a single graphic designer to provide a unique conference image that is used in the Web page, proceedings materials, as well as the conference giveaways.

D.5   Badges

We printed a name badge for each person using latex and a slightly modified version of the labels.sty package. The badge included an overlaid graphic border, and liberty image, and we put the name on two lines to avoid word wrap problems. The attendee's organization appeared on the last line. The name information came from the "Badge Name" field in the attendee record, however many people did not understand this and entered varied items such as "Dr.", "Prof." or "Mike". We ended up having to do a fair amount of hand editing of these items. It would have been better to very clearly explain this field and show an example badge on the website. Alternatively, the badge name field might be changed to be only the first name of the badge name, since that is usually the only part of the badge name that would differ from the attendee's name (i.e., Mike instead of Michael). The institution field was also problematic, since some attendees entered extremely long institution designations, which did not fit on the badge, and because it was difficult to come up with a satisfactory line breaking algorithm for the institution field. On future conferences, it would make sense to present the institution field on the registration form as two lines of with maximum lengths (dependant on what will fit on the badge), forcing the attendee to indicate an appropriate line break, and constraining the length of the lines.

The badge also included several dots at the bottom to indicate the items that the attendee had registered for. These dots were surrounded by two delimiter marks to prevent people from coloring in their own dots. The code we used was as follows:

Red	Sun Tutorial
Orange	Mon Tutorial
Yellow	Main Conference
Green	Banquet
Blue	Fri Workshop
Purple	Sat Workshop

This worked well and avoided the need for special tickets for each event. The print badges php page queried the database and collected the registration information for each attendee and wrote the

sequence of dots to the LaTex file of badges along with the name and organization. For people who bought extra banquet tickets for people outside of the conference, we created "Banquet Ticket" badges that just had a green dot. We did not have enough volunteers to be carefully checking badges at each event besides the banquet, but this would have been easy to do given more staff.

The badges were printed on perforated cardstock with 6 badges per page, each 3"x4". Each badge was placed inside a double pocket badge holder with a lanyard. The second pocket held a double sided schedule card, printed on the same paper, that showed one day's events, times, and locations on each side. Additional cards for other days were put in the registration packet.

We also included an RFID card in each badge holder. When we printed the badges, we also saved a CSV file where each line contained the name, organization, e-mail, and website URL for each attendee. Then, after we put the RFID in the badge, we held it over the reader, and an application associated that unique ID with the current line of the CSV file. This file was used during the conference so that when a member of the audience asked a question with a microphone that had the reader attached, the ID was looked up, and the information was displayed on a separate screen. It might have been better to do this all in the database, but it was implemented late.

The small conference schedule and the RFID tag are new to the conference. People reacted positively to both novelties.

D.6   Receipts

We generated a receipt for each attendee by having a php program fill in a template latex file with values from the database. The receipts were addressed to the payer and had a summary of the items purchased and the payment transactions showing the date, type of transaction (credit card, cash, etc.) and amount. Refund credits were also shown, and we had a total payments and balance due lines at the end of the summary. Then we listed the individual attendees associated with this payment and the items they were registered for. The web administration page made it easy to print a new receipt for an attendee when they bought a banquet ticket, or added a new event for instance.

D.7   Registration Packets

We separated the attendees into two groups, those that were only attending a workshop and everyone else. By keeping them separate we could keep the workshop people from picking up their packets during the conference and attending the conference without registration. Then we generated a list of names for each group, sorted alphabetically, and we printed small name labels for each person. The label layout was accomplished using LaTeX again. For each attendee we created an envelope with the name label on the outside. Inside we had a free copy of *IEEE Multimedia*, a few notices and flyers, a conference program, bus and subway maps, a badge and a receipt. We used different colored envelopes for special cases. Red envelopes indicated people who had a free/press pass and should not receive any of the goodies or proceedings. White envelopes indicated student volunteers, who did not get proceedings until they completed their assignments. In other cases, we stapled index cards to the packets for people that still owed us money or had ordered additional proceedings, etc. The process of creating the packets took much longer than expected and it is advised that this be started as early as possible.

D.8　Registration Desk

The registration desk was set up with all of the registration packets in several boxes arranged alphabetically, a computer with an internet connection, a color printer, and a telephone. We followed the advice of a previous registration chair and decided to set up the registration desk in a single place and not move it, even though our opening session actually took place in another building. I think this was good advice since it would have been a lot of work to move the entire desk with all the proceedings and goodies back and forth. We were supposed to tell people that registration was not absolutely necessary for the first session, and that they could register during the day. However, this did not happen and we had a large crush of people Tuesday morning. To compound this problem, we had only two volunteers show up on time. To speed this up we should have had the backpacks prepared ahead of time with a copy of the proceedings (book and CD), and the gifts (whistle and flashlight) inside already, instead of putting these things together on the spot.

The computer and printer at the registration desk allowed us to register new attendees, and to print up new or replacement badges and receipts at the registration desk. The printer could not print a single badge (it had a minimum page size it would accept), so we printed replacement badges on an ordinary 8.5 x 11 sheet of paper, and then cut out the badge.

D.9　Communication Issues

It is important to establish communication between the various conference chairs and the registration chair early. Initially, we did not realize that it should be possible for people to attend a workshop without registering for the main conference. We had to make fast changes to the registration page to allow this. Another problem that occurred was that I did not realize that workshop proceedings would be included on the CD with the main conference (it's much cheaper to do it this way). Our registration page made it seem that people attending a workshop only would need to purchase the main conference proceedings separately. We also didn't initially distribute CDs to the workshop attendees, because we thought they only received paper proceedings. After the morning workshop registration, we had people stop back at the desk to pick up a CD.

During the conference, the registration desk is a focal point of problems because people can easily find it and there is always someone staffing it. Unfortunately, many problems needed to be resolved by the local arrangements chair and he was not always easy to find. After the first day we started using walkie-talkies to contact each other, but many of the problems occurred on the first day of the main conference, and this resulted in a lot of useless running around.

We insure communication before the conference in addition to the general chairs, the registration chair, local arrangements and proceedings chairs should be copied on all the decisions being made (e.g. number of registrations, proceedings, CDs, etc.)

During the conference there should be either mobile phone or walkie-talkie communication possible among the general chairs, registration chair, local arrangements and technical program chairs.