

Initial Post-Conference Report to the RAS Conference Board

Bill Hamel, General Chair

August 16, 2002

Report Outline

- **Highlights & Results**
 - Conference organization
 - Local arrangements
 - Technical program
- **Problems**
- **Lessons Learned – Future ICRA's**
- **Preliminary Financial Results**

ICRA 2002 Organization

General Chair

William R. Hamel, University of Tennessee

Program Chair

**Anthony Maciejewski,
Colorado State University**

Program Vice Chairs

Europe: Antonio Bicchi, Universita di Pisa

Asia: Shigeki Sugano, Waseda University

**USA: Lynne Parker,
Oak Ridge National Laboratory**

Publicity Chair

Max Meng, University of Alberta

Publications Chair

George Lee, Purdue University

Finance Chair

Xiaoping Yun, Naval Postgraduate School

IEEE Conference Services: Vita Feuerstein

Local Arrangements Chair

**Ella Atkins,
University of Maryland**

Local Arrangements Vice Chairs

**Allison Okamura,
Johns Hopkins University**

**Norman Caplan,
Washington University**

Workshops and Tutorials Chair

**Ning Xi,
Michigan State University**

Video Proceedings Chair

**Reid Kress,
University of Tennessee**

Exhibits Chair

William Townsend, Barrett

At Large

**Charles Nyugen
Art Sanderson
T. J. Tarn**

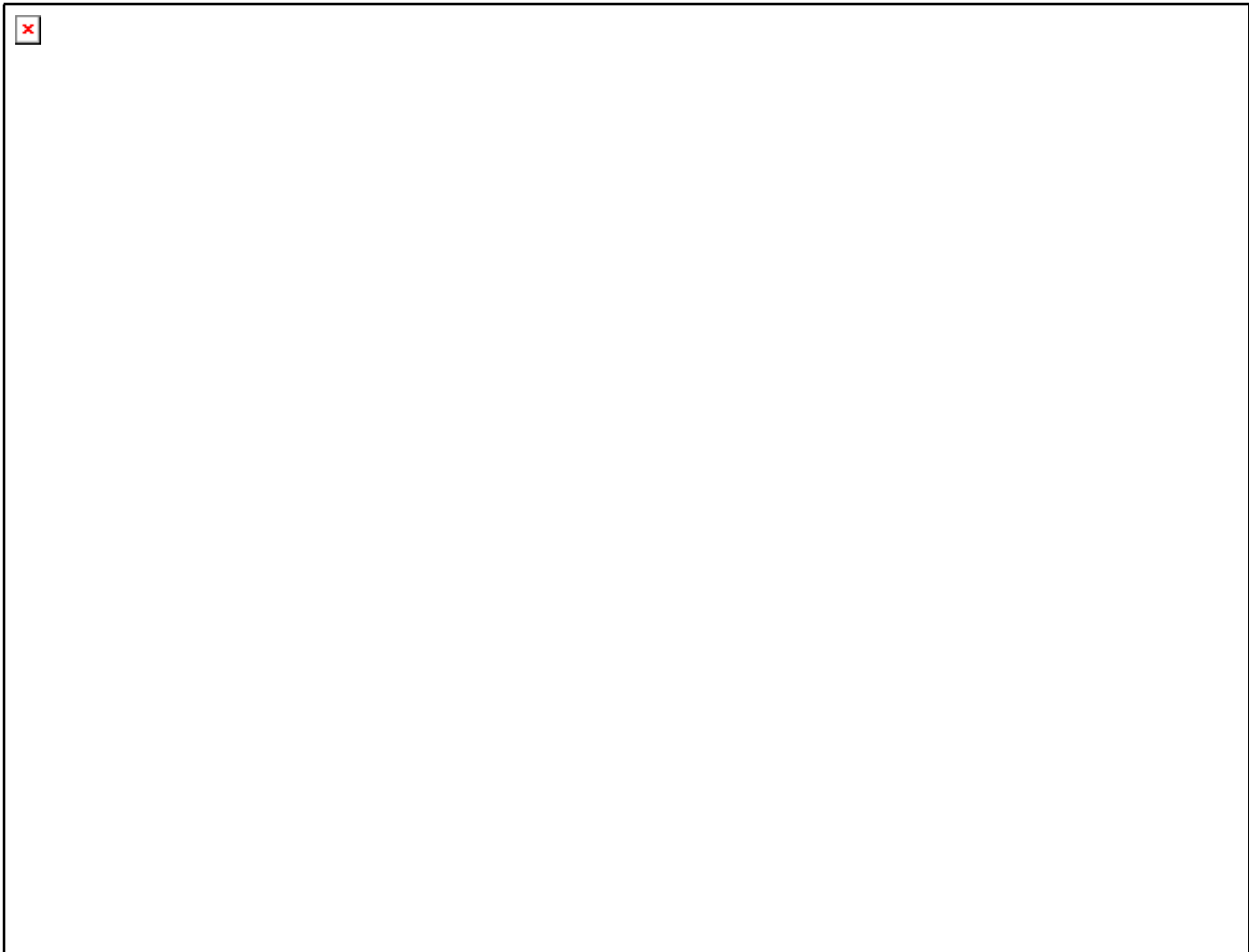
Hotel: Crystal Gateway Marriott

- {Few minutes, indoors} walk from Metro Crystal City, UG Shops
- One Metro stop from Reagan International
- Room rate: **\$163/night**
Reservation cutoff: 4/22/01
- Space for 20 exhibit booths
- All food events in hotel



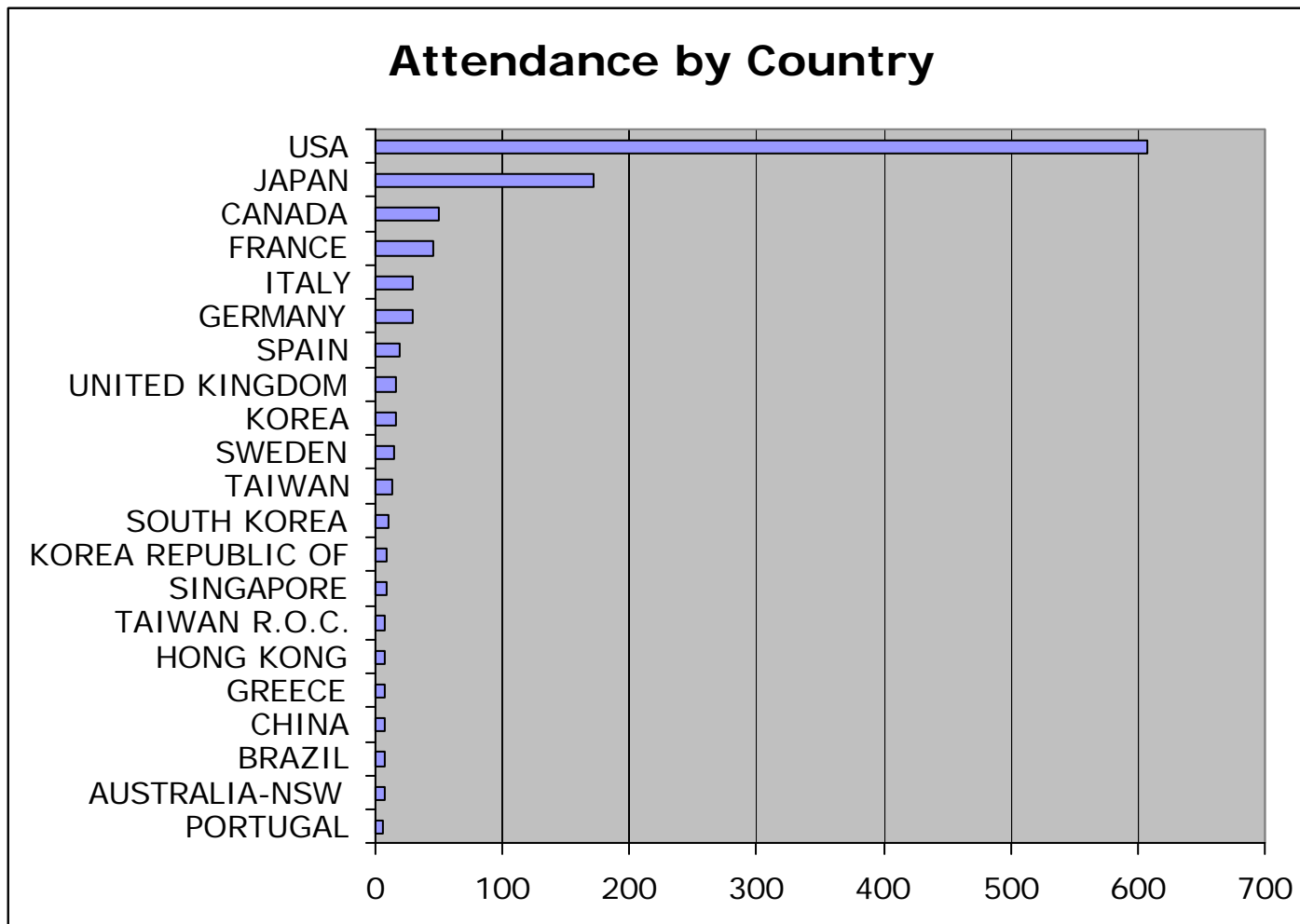
Program Structure

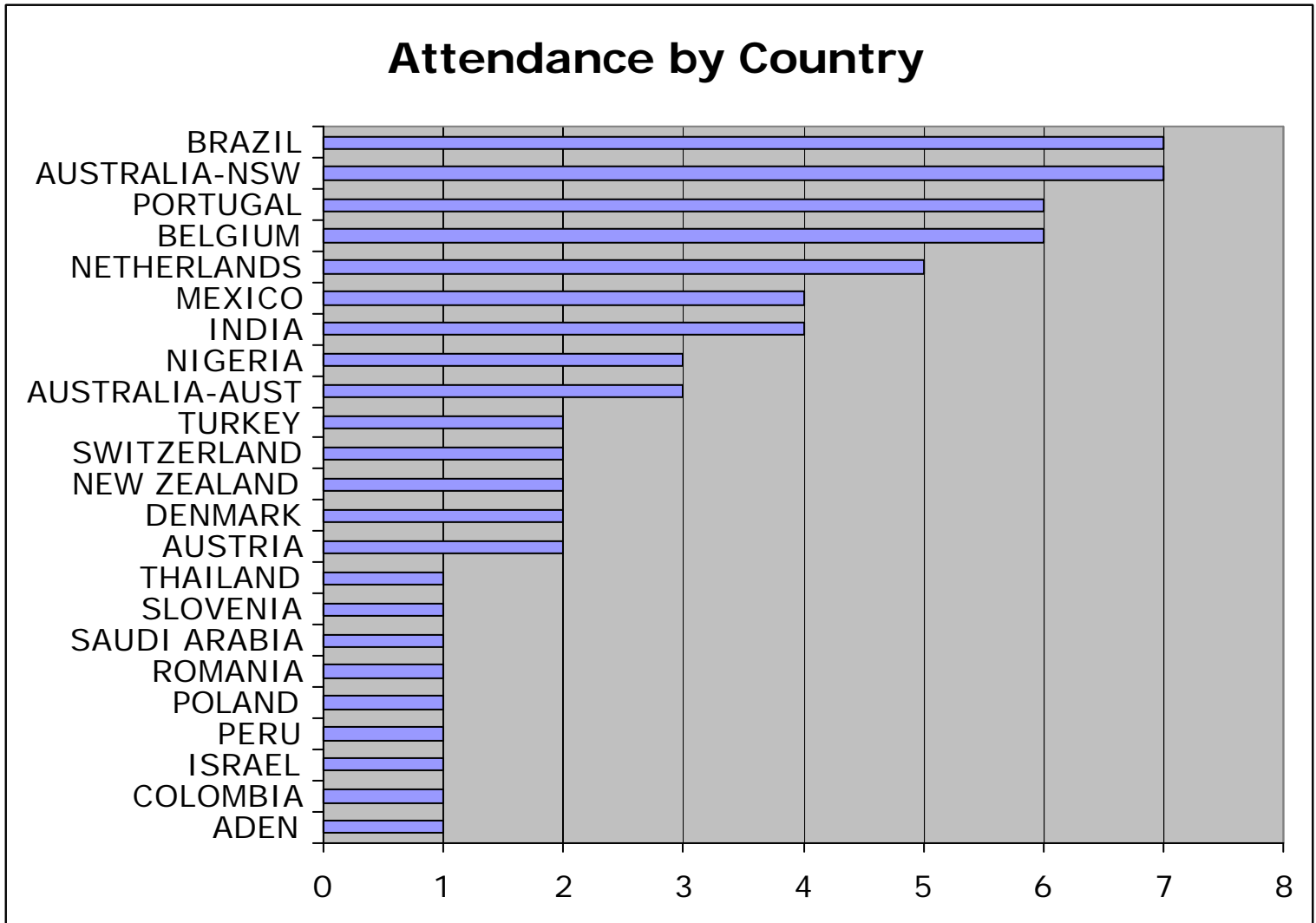
- **Sat.-Sun. May 11-12, 2002**
Workshops and Tutorials
Committee Meetings
- **Monday May 13, 2002**
Plenary (Biorobots)
Technical Sessions
Bi-Plenary (Military/Human)
- **Tuesday May 14, 2002**
Technical Session - am
Video Sessions
Cultural Afternoon
Technical Session - pm
Banquet (awards)
- **Wednesday May 15, 2002**
Plenary (Rescue)
Technical Sessions
- **Thursday May 16, 2002**
Committee Meetings (am)
AdCom (pm)

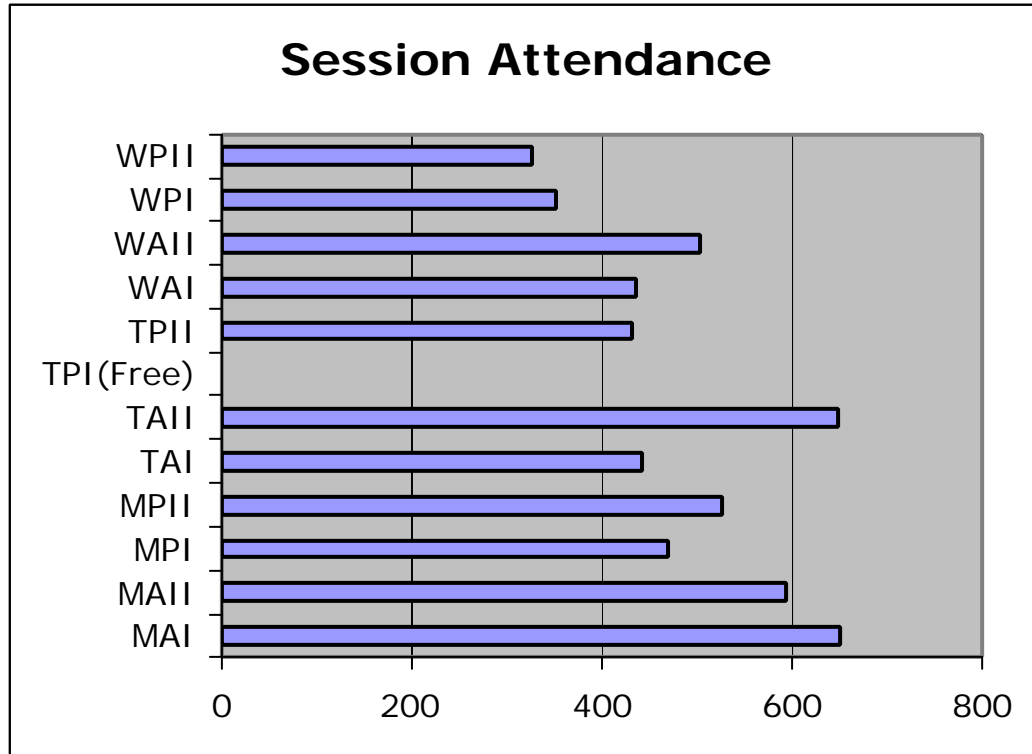


Attendance was strong

- **IEEE Members** **462**
- **Non IEEE Members** **169**
- **Students** **310**
- **Exhibitors (13 booths)** **25**
- **International Student**
- **Scholarships** **12**
- **Student Volunteers** **45**
- **Press** **3**
- **Workshops & Tutorials** **182**







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112

Cooperative Concurrent Mapping and Localizati
John W. Fenwick, Paul M. Newman, and John J

ICRA 2002 Local Arrangements

Ella M. Atkins

University of Maryland

Allison M. Okamura

The Johns Hopkins University

Observations...we think people enjoyed themselves



- **Mother's Day no problem**
- **Electronic publicity effective**
- **100% hotel room commitment**
- **Awards focus at Banquet**
- **Standing room only at plenary talks**
- **Free afternoon enjoyed by most**



LA Duties (in order of time spent)

- Recruited and supervised volunteers
- Organized lab tours at UMD & JHU (with tour buses)
- Gathered local tourism and travel information to Publicity Chair
- Created banquet entertainment video (with volunteer)
- Preliminary pass at room assignments, then passed on to Program Chair

LA Duties, Cont'd

- Minutes of meetings and keep list of "To Do's"
- Looked into possible banquet sites, banquet speakers
- Gathered tourism pamphlets and display near registration
- "Put out fires" at the conference
- Had volunteers record session attendance and take speaker pictures
- Helped select conference gift

Details of Session Data Collection

- **An attendance sheet was created for each session**
- **Session monitors (student volunteers) recorded:**
 - number of attendees for each paper presentation
 - average attendance over the whole session
- **Session data for the entire conference was compiled by extra volunteers during the last session**

Details of Volunteer Organization

- Used an official volunteer sign-up form, and distributed several months before the conference
- Allowed volunteers to specify their preferred sessions, and tried to assign them
- Had one volunteer for each session, plus at least 2 extra
- Each volunteer was assigned 4 half-days (distributed over the 5 days of the conference)
- Gave the volunteers plenty of food
- Since there were not enough local students, took some from other schools
- Organized carefully with the 40+ volunteers; posted instructions and volunteer schedules in headquarters

Lessons Learned

- **Have extra computers and printers for producing signs in the headquarters**
- **Take many digital pictures, and use them at the banquet, closing reception, etc.**
- **Prepare a special video or entertainment piece for the banquet**

More Lessons Learned

- Apply early to NSF for student and young faculty fellowships
- Take session attendance data for deciding room distribution next year
- Having two Local Arrangements Co Chairs made it manageable

Learning from Mistakes

- Do not use a single volunteer to get all the pictures for 14 parallel sessions. They rush, disturb the speakers, and don't get everyone.
- Use hotel A/V system so you don't have to set up and take down the projectors every day.
- Charge for tour transportation. People didn't mind paying \$10, even at the last minute.
- Be strict on entrance to tutorials & workshops – we had overcrowding

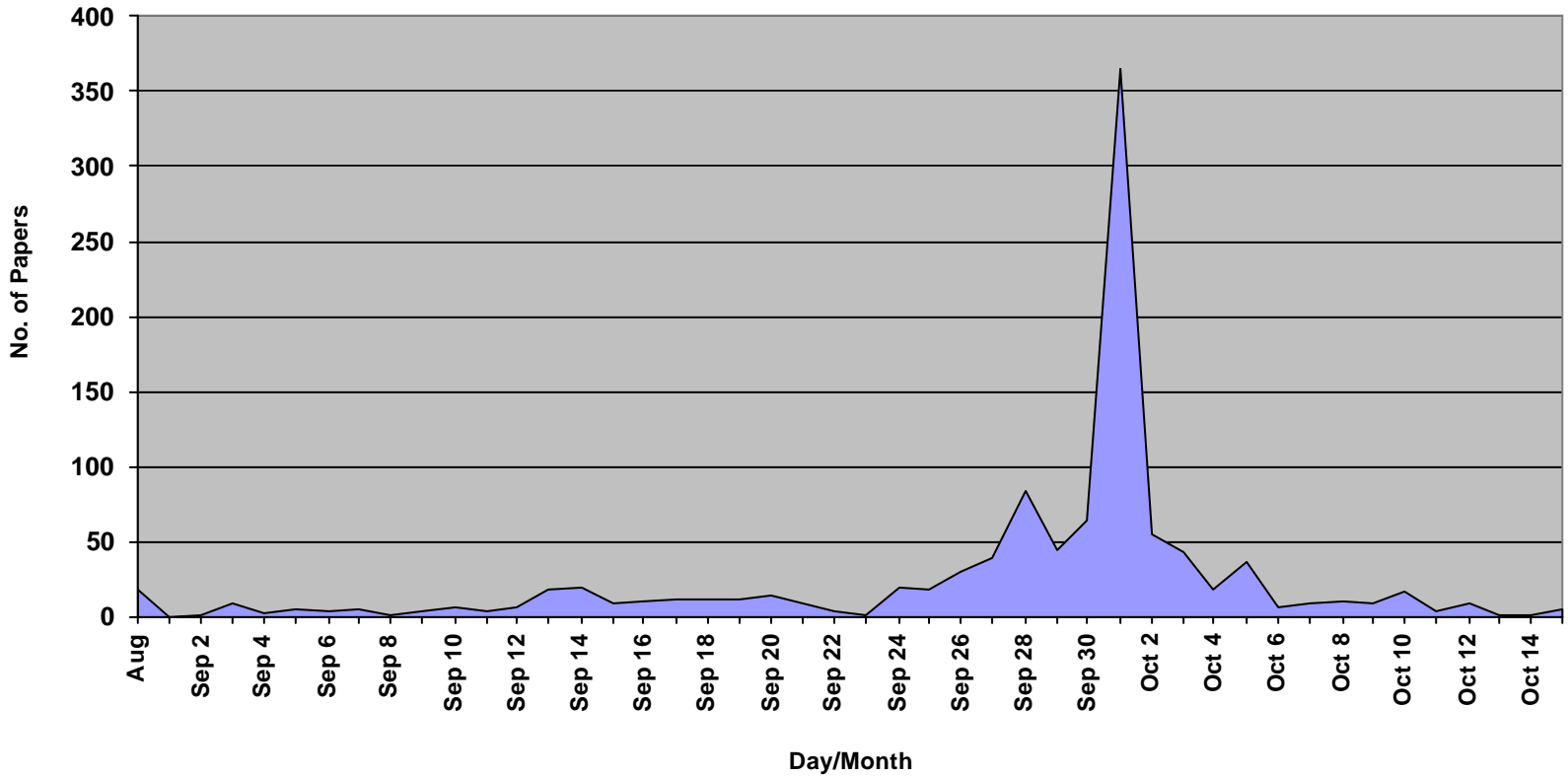
Technical Program Final Report

- Paper submission
- Review statistics
- Issues in electronic publication

Paper Submission Statistics

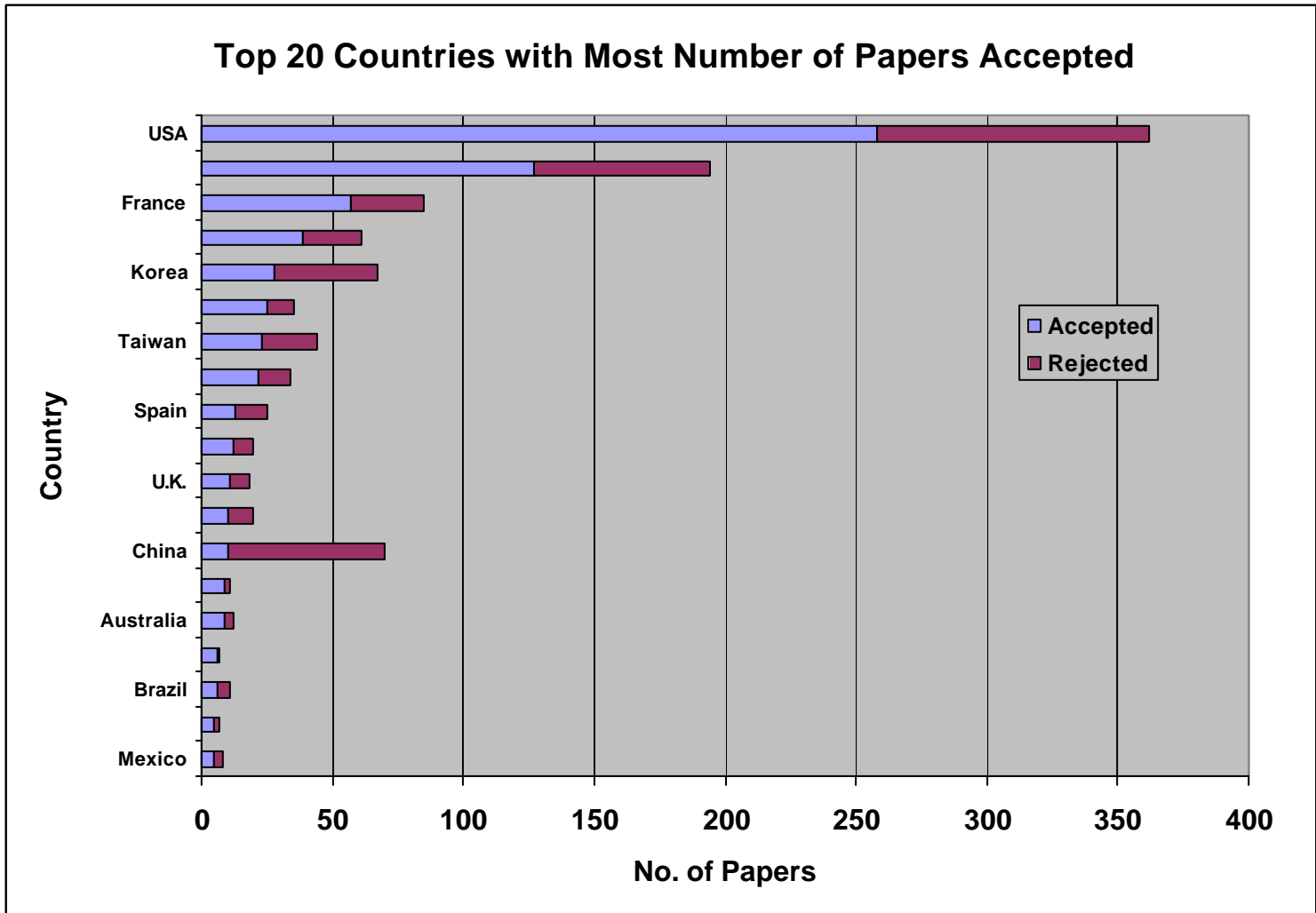
- **1172 paper submitted (ICRA record)**
 - 365 on Oct. 1
 - 702 in a 7 day period
- **42 different countries**
 - 98 multi-country papers
- **Mobile Robotics continues to be the most popular topical area**

Daily Paper Submission Trend



Paper Review Statistics

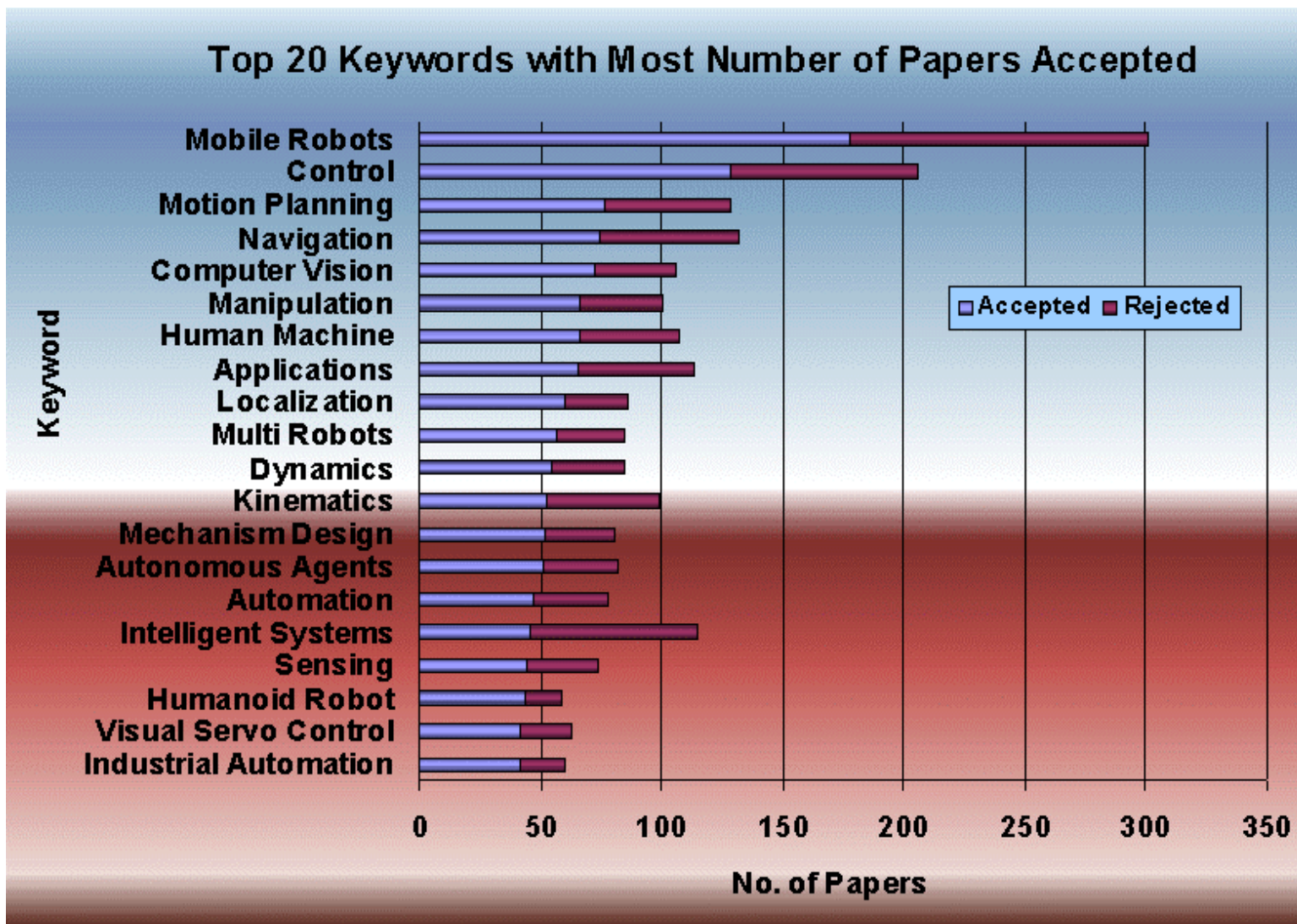
- **689 papers accepted (58.8%)**
 - last 4 ICRA's all near 62%
- **2739 total reviews**
 - average of 2.3 reviews/paper
 - no paper less than 2 reviews



Comments on Geographic Distribution

- US has significant increase
- China now in top 4 for submissions (but worst acceptance rate)
- Korea surpassed Canada (in submissions but not acceptances)
- Portugal has 100% acceptance

Top 20 Keywords with Most Number of Papers Accepted

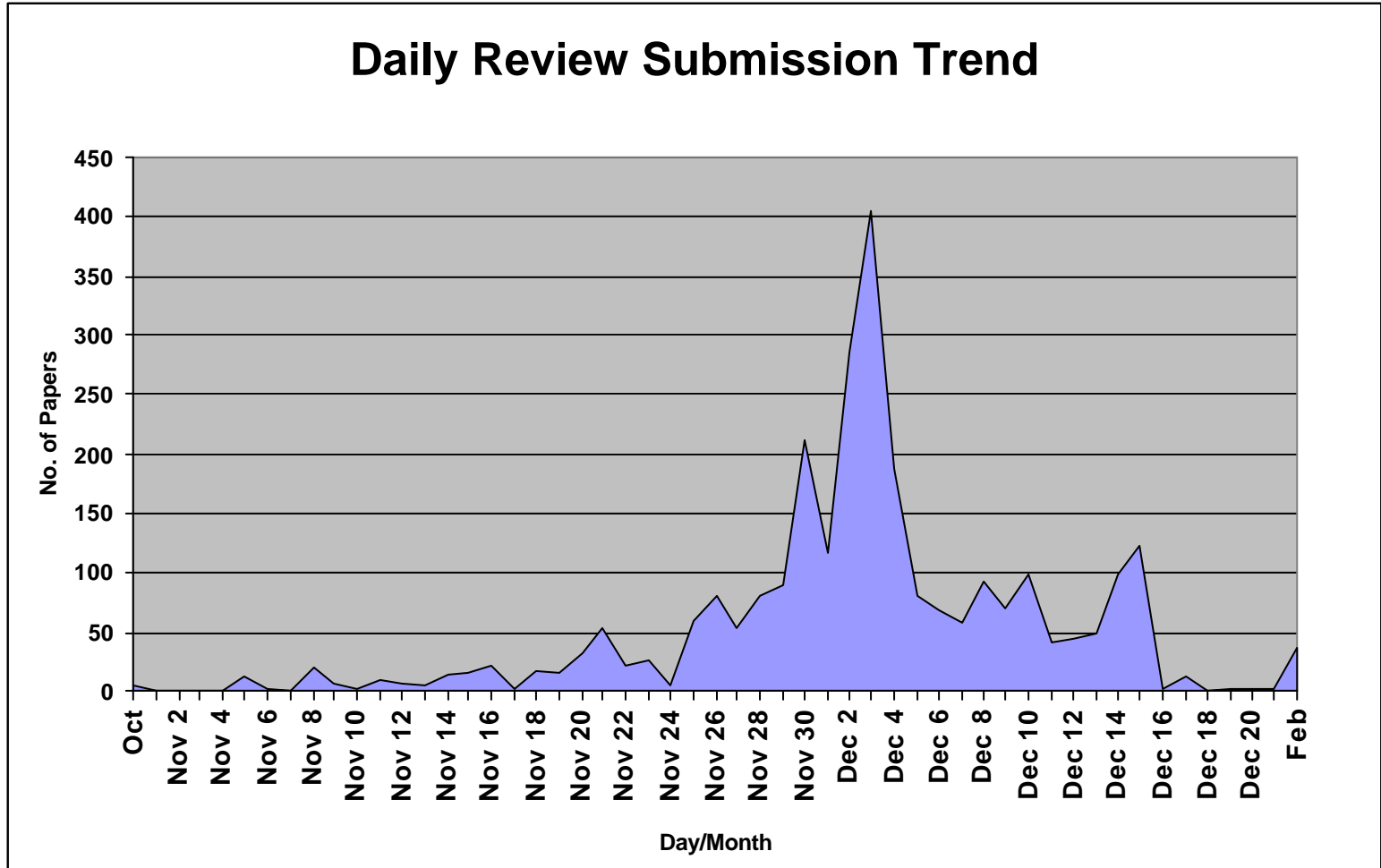


Comments on Topic Distribution

- **Mobile Robots continues to be #1**
 - 30 papers accepted on localization alone
- **Modular Robotics has highest acceptance rate (85%)**
- **Sliding has lowest (0%) - 8 papers**
 - Neural Networks 33% acceptance

Comments on Automation Acceptance Rates

- **Automation has highest ratio of PC members to paper submissions**
- **Automation overall is 60%**
 - Computer Integrated Manufacturing 84%
 - Flexible Manufacturing 81%
 - Petri Nets 73%
 - Industrial Automation 70%



Paper Review Classification (Easy Papers)

$(m \geq 3.5 \text{ and } s \leq 0.5) \Rightarrow \text{accept}$

$(m \leq 1.5 \text{ and } s \leq 0.5) \Rightarrow \text{reject}$

After reviews checked by Program Chair:

- 567 papers accepted
- 328 papers rejected

Paper Review Classification (Borderline and Split Papers)

277 papers with $1.5 \leq m \leq 3.5$

- Each assigned to most appropriate Vice Chair to make preliminary assessment for PC meeting.
- Papers and reviews available to PC members at PC meeting.
- All decisions from PC meeting reviewed by Program Chair with possible additional review.

Statistics on Final Decisions

- **Accepted Papers**

$$\mathbf{m}=3.9 \quad \mathbf{s}=0.6 \quad \text{max}=5.0, \text{min}=2.5$$

- **Rejected Papers**

$$\mathbf{m}=2.3 \quad \mathbf{s}=0.6 \quad \text{max}=3.5, \text{min}=1.0$$

- **PC Member Review Variation**

$$\mathbf{m}_{\max}=4.7, \mathbf{m}_{\min}=1.5$$

Author Complaint Process

All author complaints handled uniformly

- Program Chair reads paper, re-reads all reviews, Vice Chair recommendation, PC meeting decision
- Letter to author outlining procedure followed and rational for decision
- Possible additional reviewer

START System Critique

- **Positives - in general works well**
 - Paper and review collection is functional
 - Review statistics are adequate
 - Joel Burdick was a big help
- **Negatives - need to add features**
 - reviewer assignment
 - final program development
 - fix dangerous failure mode

Reviewer Assignment...

Improve keyword support

- Hierarchical keywords with priority for both papers and PC members
- Automate dot product calculation between paper keyword vector and PC member keyword vector, including normalized
- Keywords don't work as well as bibliography correlation (analogous to Google search engine)

Session/Track Assignment

- **START has no support**
- **Automate:**
 - Paper vs paper matrix of keyword dot products
 - Clustering of this matrix
 - Support for constrained optimization
 - Separately include each author in submission interface
 - check author/chair/award conflicts
 - author interests not reliable for track assignment

Dangers of Electronic Submission

- Needs to be fail safe
- START has a catastrophic failure mode if disk quota is reached

Conference Publications

Significant delay in the submission of final paper manuscripts...OmniPress

- was overloaded with preparing the ACC conference
- had never produced the Conference Digest (needed to develop software for collecting graphics)
- not as automated as one might expect

Avoidable Publication Costs

Authors do not follow instructions...

- 100 papers (631 pages) scanned by OmniPress due to bad PDF files
- 998 pages adjusted for incorrect size
- \$25 charge to email author
- \$85/hour to work on papers
- costs minimized by Program Chair instructing OmniPress on the printing of foreign font sets

Key Problems

- **IEEE conference planner assignment**
- **Hotel sales management**
- **Local arrangements chairs**
- **Video chair (time window difficult)**
- **Registration form (implied terms)**
- **START (features and support)**
- **OmniPress expertise and workload**

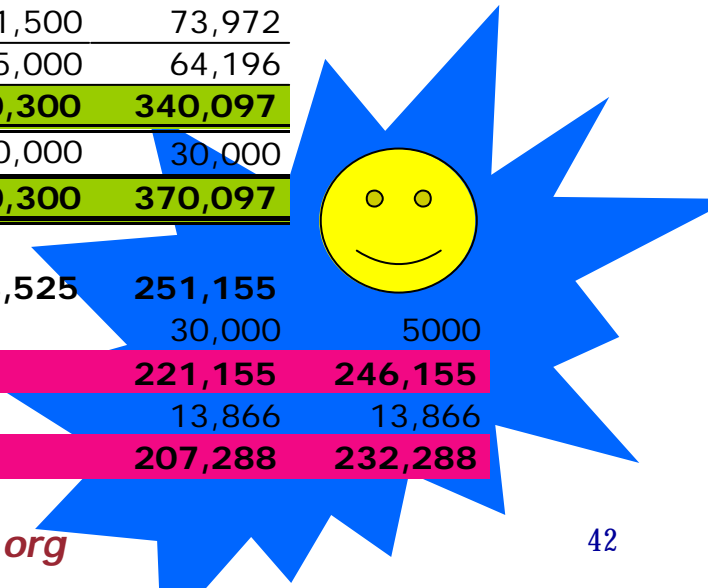
Lessons Learned

- **Organizing Committee**
 - Local arrangements critical (now have fairly good “users” manual)
 - Follow up on slow responders early; make changes at the hint of difficulties
- **Web-based functions are efficient and cost effective**
 - IEEE conference registration
 - Electronic publicity
 - Web-based paper processing
- **Conference data should/can be collected - important for planning**
- **Professional support critical – IEEE CMS**
- **Few PC’s and lots of e-drops**
- **Follow-up: author registration, extra page charges**
- **Avoid banquet speakers – nothing serious; entertainment at most; focus on awards**
- **“Free” time in the program schedule is workable and desirable**
- **Avoid large social amenities**
- **Opening/closing ceremonies are effective and appreciated**

ICRA02 Financial Results

2002 IEEE INTERNATIONAL CONFERENCE ON
ROBOTICS AND AUTOMATION

INCOME	Budget	Actuals
Registration Fees	308,050	392,200
Conference Publication Sales	101,875	97,233
Exhibits	30,000	19,500
Social Functions		6,720
All Other Conference Receipts	38,900	75,598
Total Conference Income	478,825	591,251
Conference Loans	30,000	30,000
Total Receipts	508,825	621,251
EXPENSES	Budget	
Promotion	2,000	3,166
Conference Publications	78,925	78,713
Exhibits	14,000	9,416
Social Functions	148,875	110,634
Administration	81,500	73,972
All Other Conference Expenses	75,000	64,196
Total Conference Expenses	400,300	340,097
Loan Repayments	30,000	30,000
Total Outlays	430,300	370,097
SUBTOTAL	78,525	251,155
Remaining Video Production		30,000 5000
CONFERENCE SURPLUS		221,155 246,155
RAS Committee Meetings		13,866 13,866
CASH FLOW TO RAS		207,288 232,288



Taiwan Next!

