
Report of the
ACM SGB Task Force on the Impact of
Increasing Conference Submissions

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Chair

Caveat

This report represents **ONLY** the chair's interpretation of the task force discussions

Recommendations were not discussed

Charge from SGB EC Chair, Bob Walker

“...put together a report for the SGB meeting in Spring'05... to look at whether or not the increasing submissions is a problem, what conferences are or could be doing to solve it, etc. All the things Patterson talked about, plus probably other things the Task Force will come up with as it goes about its job.”

Note: *The task force only addressed the growth issue, not Patterson's "Big Idea" idea.*

Executive Summary

- ◆ Are conference submissions growing?
 - yes, but not evenly across conferences and time
- ◆ Is there a problem?
 - yes, for certain conference structures
- ◆ What are the effects?
 - all you would expect
- ◆ What are communities doing in response?
 - increasing PC size, culling early, adjusting publication styles (e.g., first-class posters), coordinating events, adding new events, ...

Executive Summary (cont.)

- ◆ Basic recommendation: Gather more data
 - “hard” data
 - » from multiple perspectives: PC, PC member, author
 - ◆ PC: size, membership, overlap, load, ...
 - ◆ PC member: PCs, rotation, authorship, load, ...
 - ◆ author: submissions, resubmissions, ...
 - » also need data from outside ACM
 - “soft” (survey) data
 - » from multiple perspectives: PC chair, PC member, author, attendee, reader
 - » satisfaction, ease of (re-)submission, quality (papers, reviews), ...

Executive Summary (cont.)

◆ Tactical recommendation: SC chairs summit

– purpose

- » understand broader community effects
- » discuss and share data
- » discuss and share PC procedures

(convened by ACM President and SGB Chair?)

◆ Strategic recommendation: Greybeard panel

– purpose

- » rethink role and relationship of conferences and journals

(convened by ACM and IEEE-CS presidents?)

TF Planning: Desired Outcomes

- ◆ Confirmation or refutation of the problem
 - are the trends holding?
 - is the problem widespread or confined?
 - what effects on authors, on PC members, and on our community have we noticed?
- ◆ A menu of PC operating procedures
 - what are the traditions in each community?
 - what various things have been tried?
 - what new procedures could be tried?
- ◆ Advice to the community

TF Planning: Activities

- ◆ Phase 0: form committee
 - representation from ART, COMM, DA, MOBILE, SOFT, ECOM
- ◆ Phase 1: data collection
 - basic submission/acceptance rates
- ◆ First conference call
- ◆ Phase 2: procedure catalog
 - existing and imagined procedures
- ◆ Second conference call

TF Members

- ◆ Victor Bahl, MSR (MOBILE)
 - Chair, SIGMOBILE; SC, SenSys; SC, MobiCom; SC Chair, MobiSys; GC, ???; PC Chair ???
- ◆ Adam L. Buchsbaum, AT&T Labs (ACT)
 - PC Chair, SODA 2005; PC Co-chair, ALENEX 2001; SC, ALENEX
- ◆ Andrew Kahng, UCSD (DA)
 - TPC Co-chair, DAC 2004; GC, SLIP 1999; SC SLIP; GC, ISPD 1997

TF Members (cont.)

- ◆ Craig Partridge, BBN (COMM)
 - Chair, SIGCOMM; SC, SenSys; GC, SIGCOMM 1996; PC Co-chair, SIGCOMM 1994
- ◆ David S. Rosenblum, UCL (SOFT)
 - At-Large Member, SIGSOFT EC; PC Chair, FSE 2000; PC Co-chair, ICSE 2004; Chair, ICSE SC
- ◆ Michael P. Wellman, UMich (ECOM)
 - Chair, SIGecom; GC, EC 2001; PC Chair, EC 1999

TF Members (cont.)

- ◆ Alexander L. Wolf, CU and USI (chair)
 - Chair, SIGSOFT; Conference Advisor, SGB EC; PC Chair/Co-Chair, CD 2004, WOSS 2004, WOSS 2002, ICSE 2000, Coordination 1999, WACC 1999, ISAW 1996, IWSSD 1996, ICCL 1990; SC, ICSE

Conference Data

- ◆ ASE (1995-2004) [i](#)
- ◆ DAC (1998-2004) [i](#)
- ◆ DATE (2001-2005) [i](#)
- ◆ EComm (1998-2005) [i](#)
- ◆ FOCS (1990-2004) [i](#)
- ◆ FSE (1993-2004) [i](#)
- ◆ GLSVLSI (2002-2005) [i](#)
- ◆ ICSE (1992-2005) [i](#)
- ◆ ICSM (1999-2004) [i](#)
- ◆ ISSTA (1989-2004) [i](#)
- ◆ Middleware (2000-2004) [i](#)
- ◆ MobiCom (1995-2004) [i](#)
- ◆ MobiHoc (2000-2004) [i](#)
- ◆ MobiSys (2003-2004) [i](#)
- ◆ PODC (1994-2004) [i](#)
- ◆ PODS (1993-2003) [i](#)
- ◆ POPL (1973-2005) [i](#)
- ◆ SCG (1995-2004) [i](#)
- ◆ SIGCOMM (1998-2004) [i](#)
- ◆ SODA (1990-2005) [i](#)
- ◆ SPAA (1995-2003) [i](#)
- ◆ STOC (1991-2005) [i](#)
- ◆ UML (1999-2004) [i](#)
- ◆ UAI (1992-2004) [i](#)

Observations on Conference Data

- ◆ Submission growth is clear, but uneven
 - some conferences are growing communities
 - some communities are growing conferences
 - some are not growing at all
- ◆ Some dramatic oscillations
 - outside forces, timing, location?
- ◆ Acceptance numbers relatively flat
 - conferences seem to have a “size”
 - natural, artificial, historical, traditional?

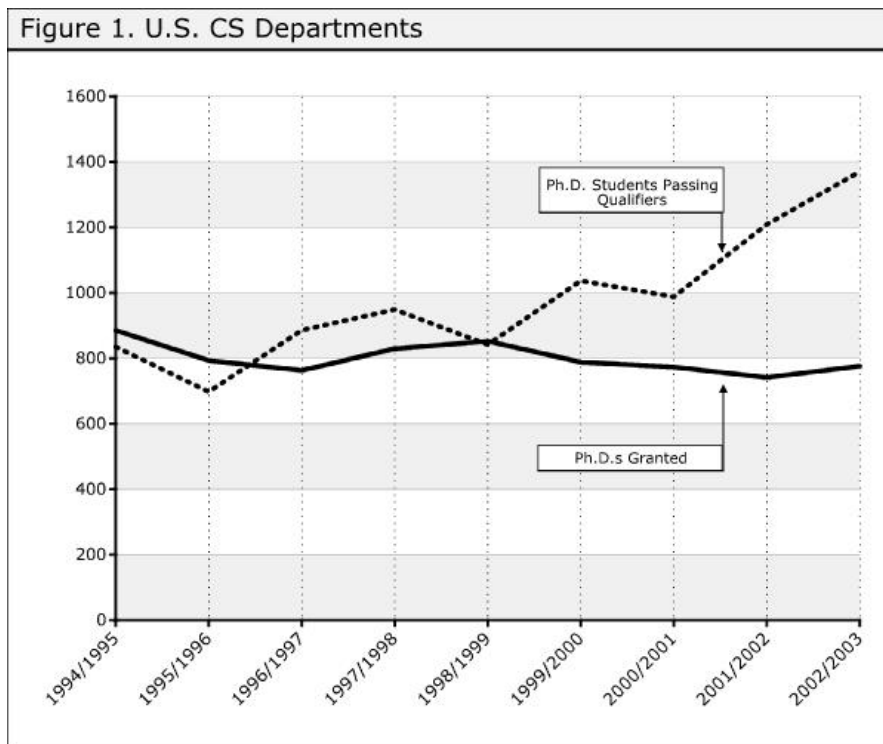
Why are Submissions Increasing?

- ◆ We only have conjectures
 - increasing numbers of faculty
 - increasing numbers of grad students
 - increasing pressure to publish
 - increasing numbers of rejections
 - increasing numbers of double submissions

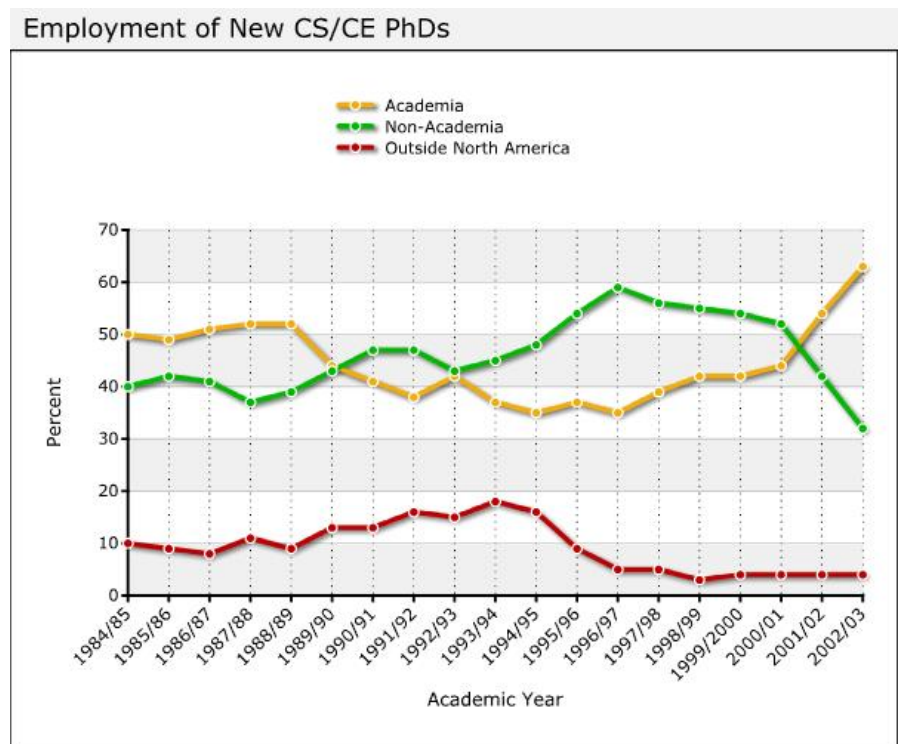
- lowering of Iron Curtin
- opening of China
- industrialization of Asia and Middle East

Why are Submissions Increasing?

Number of new US PhDs is growing...



Number of new US academics is growing...



Observations/Perceptions: Quality

- ◆ Growth mainly at or below traditional acceptance cutoff
- ◆ Placement of acceptance bar somewhat arbitrary
 - hard to find natural “knees”
 - example: SODA
 - » linear increase in scores in top 90%

Observations/Perceptions: Innovation

- ◆ Conferences adopting risk reduction strategy
 - maintaining or even lowering acceptance rates
 - papers in established areas/themes have better chance of being accepted
 - » but maybe that is okay?
- ◆ Conferences with lowering acceptance rates receiving more polished papers on narrower topics
- ◆ Substantiates Patterson's assertion

Observations/Perceptions: Stature

- ◆ Pressure to publish in top venues
 - CS argued that conferences more important than journals; now we are suffering for it
 - grad students expected to publish in top places
- ◆ Premier events being diluted by growth in number of events (ACM: 145 events)
 - how does one tell them apart? is acceptance rate a reasonable criterion?
 - people leaving ACM to start events, but eventually returning for coop or sponsorship

Observations/Perceptions: Workload

- ◆ **Between a rock and hard place**
 - grow PC, but lose coordination
 - shrink PC, but lose quality of reviews
- ◆ **Vicious cycle**
 - people agreeing to do more PCs (can't say no)
 - people do less per PC
- ◆ **Quality of reviewer feedback is decreasing**

Accommodating Growth

- ◆ Some conference structures more naturally scaleable than others
 - sub-PCs
 - hierarchical PCs
 - outside reviewers
 - triage review stage
 - electronic PC discussion
 - acceptance based on abstract (out of fashion)
- ◆ Problem: most schemes threaten quality

Maintaining Quality

- ◆ Author rebuttal
 - mixed results
- ◆ Manage and rate outside reviewers
 - train reviewers to become PC members
- ◆ Explicit resubmission and review
 - approach the journal review process
- ◆ First-class “posters”
 - reduces pressure from program constraints
- ◆ Problem: most schemes don't scale

Most Radical Idea

- ◆ Rethink the role of conferences
 - reduce importance w.r.t. journals
 - reduce number and increase acceptance rates
 - conference presentations derived from “best” journal submissions (rather than vice versa)
 - tenure evaluation based on quality of top N papers, not number of papers
- ◆ Journals have better scale properties
 - larger reviewer pool
 - less time pressure on authors and reviewers

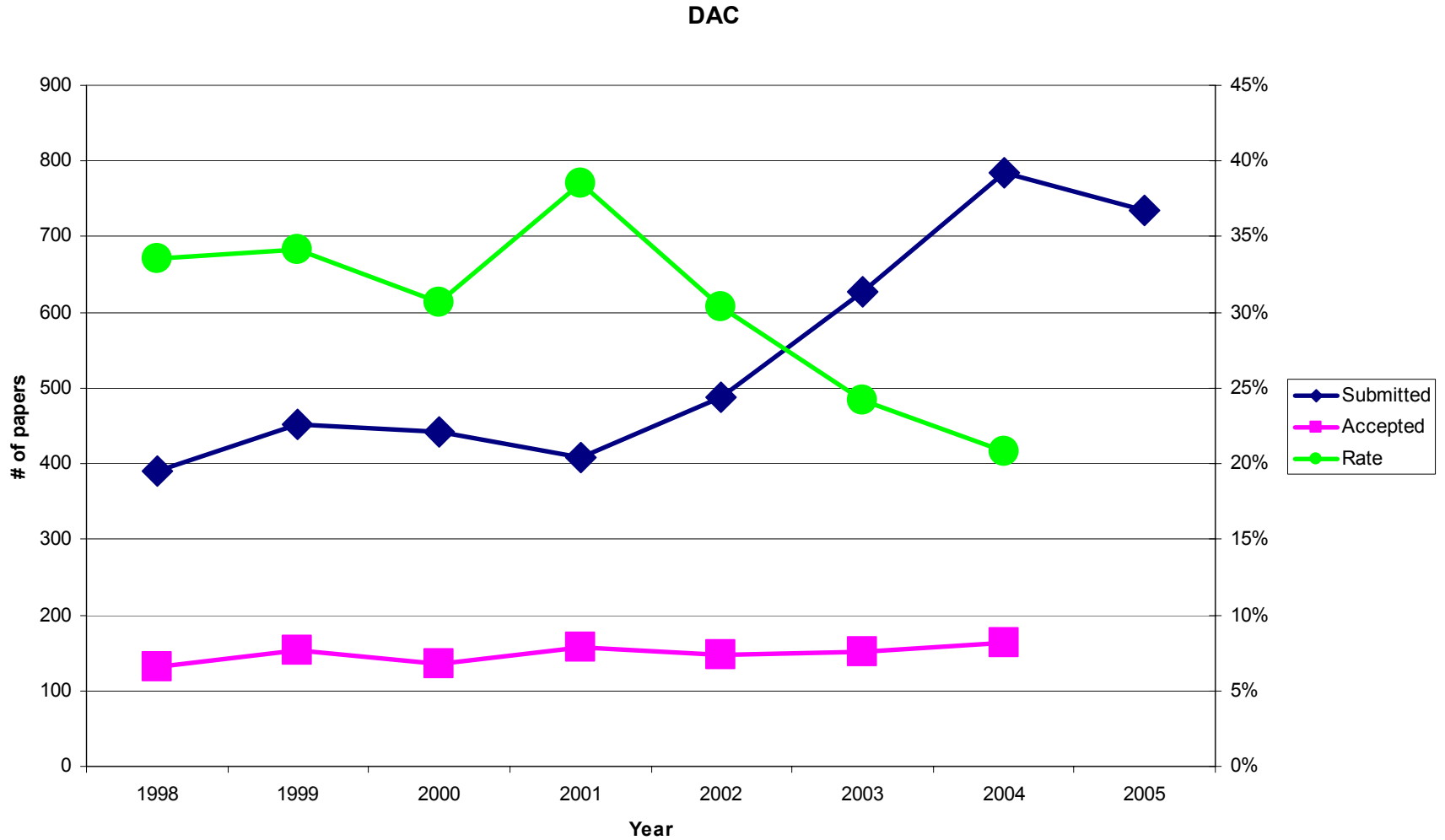
Conclusions

- ◆ Need more data
- ◆ Need broader discussion
- ◆ Need to rethink the community view of conferences and conference publications

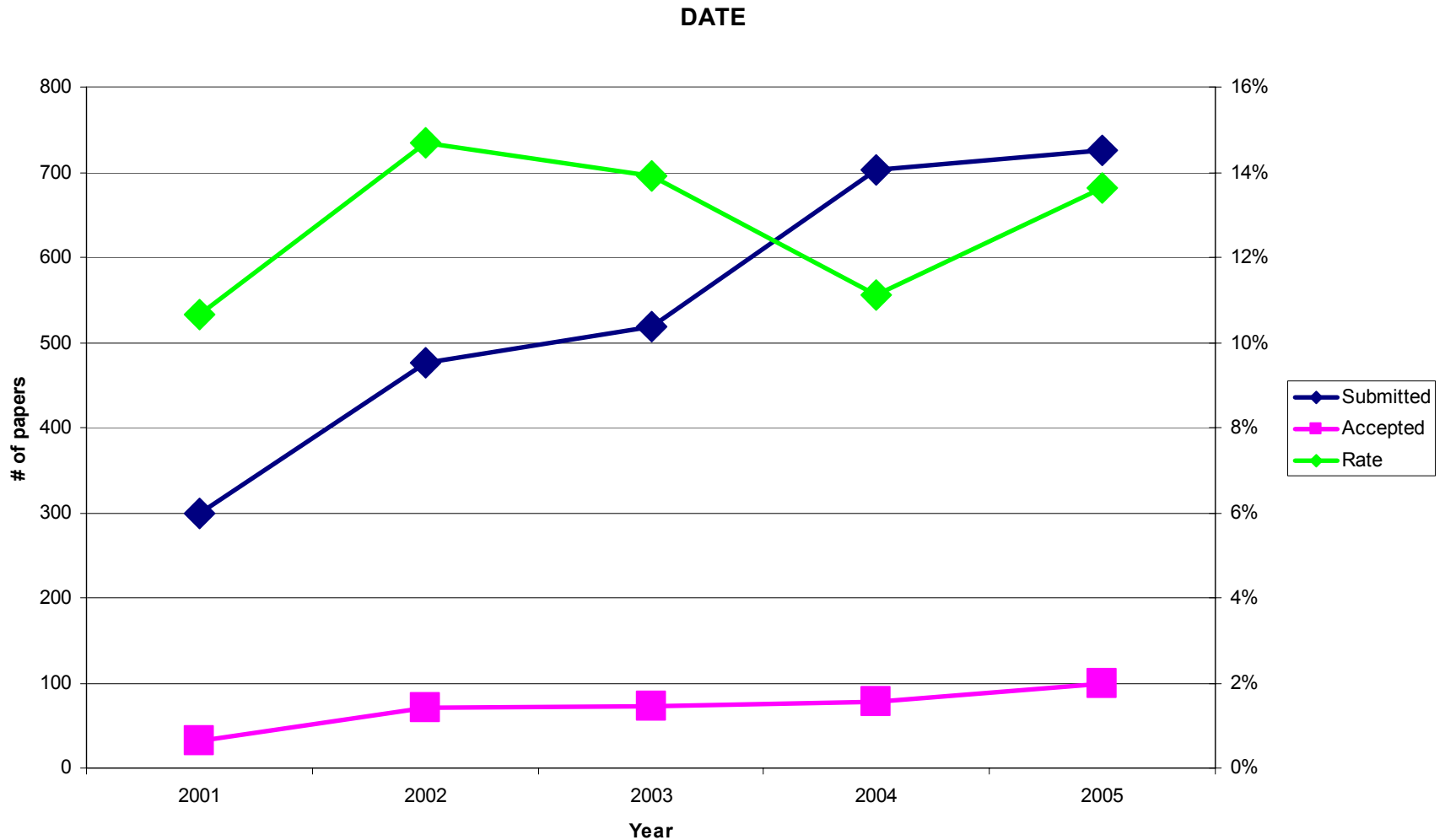
ASE (1995-2004)



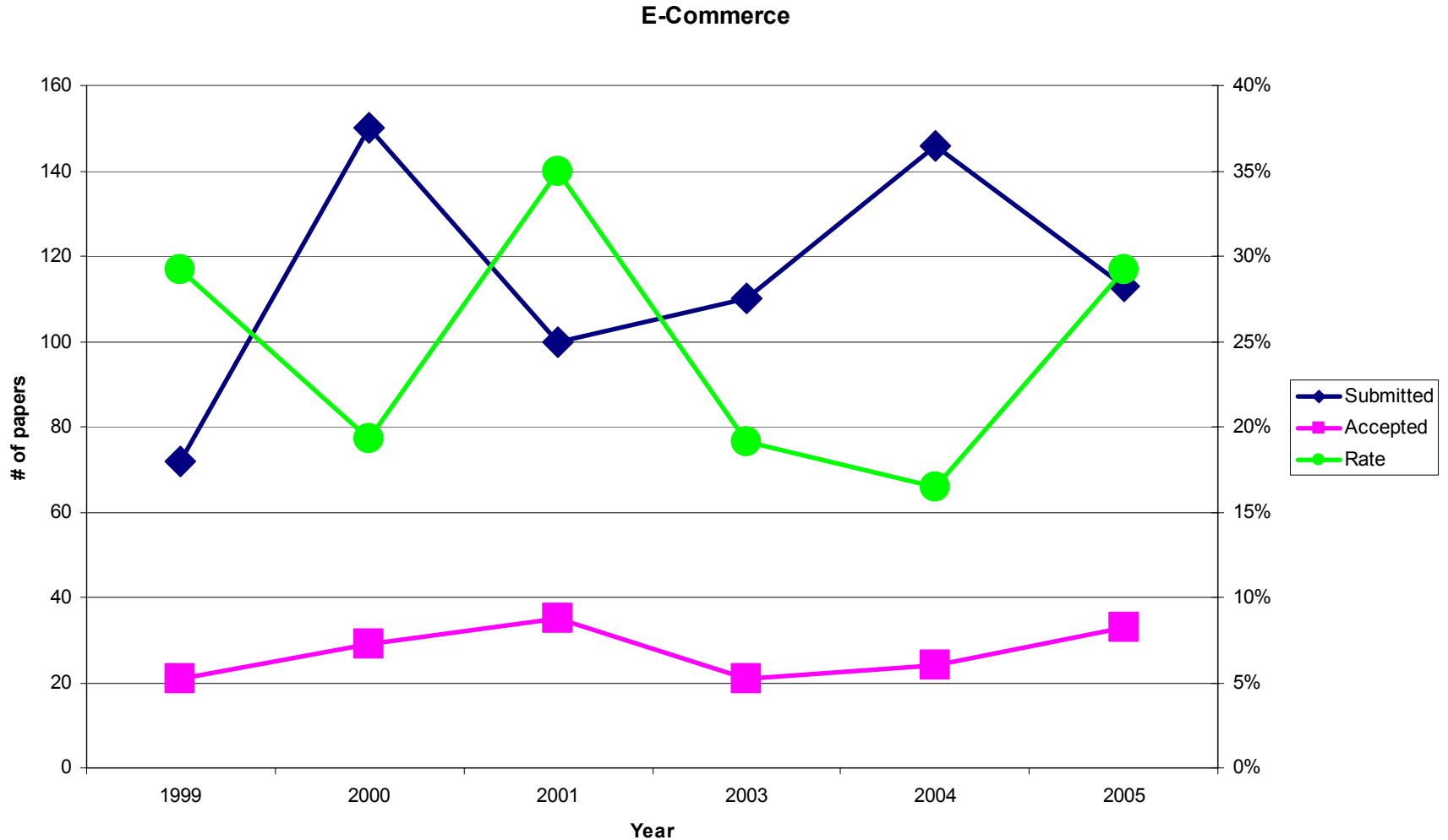
DAC (1998-2005)



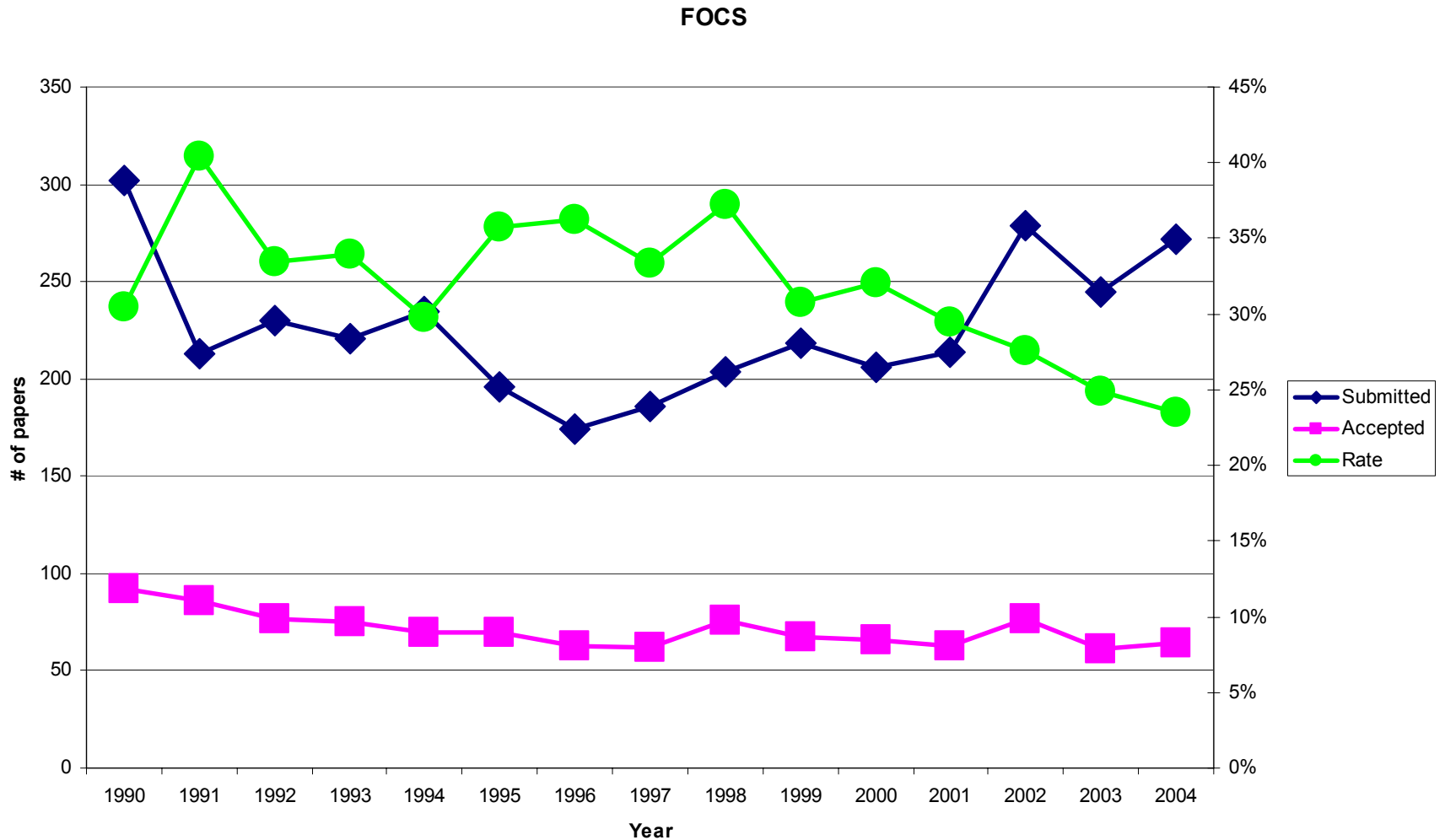
DATE (2001-2005)



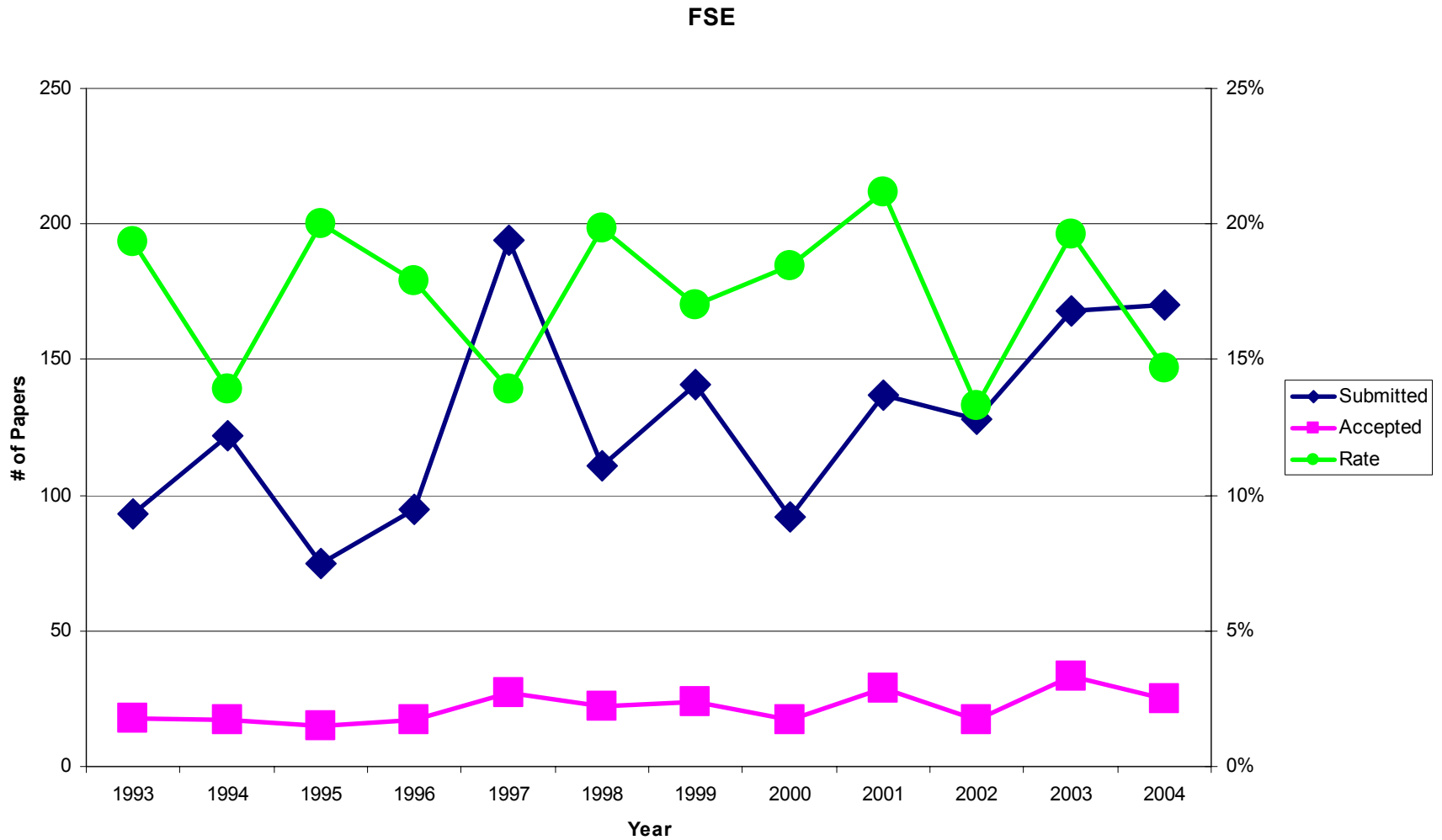
E-Commerce (1999-2005)



FOCS (1990-2004)



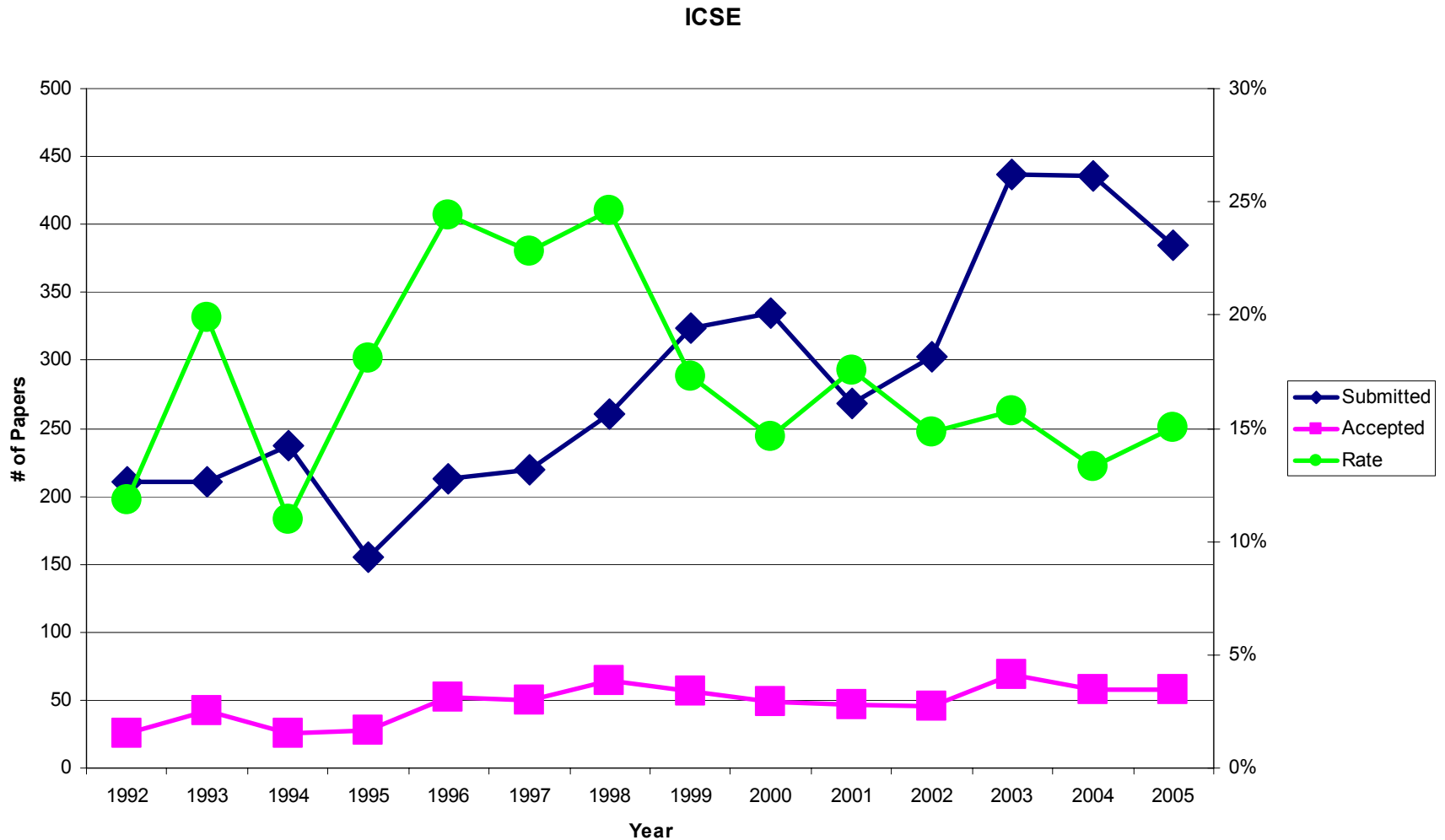
FSE (1993-2004)



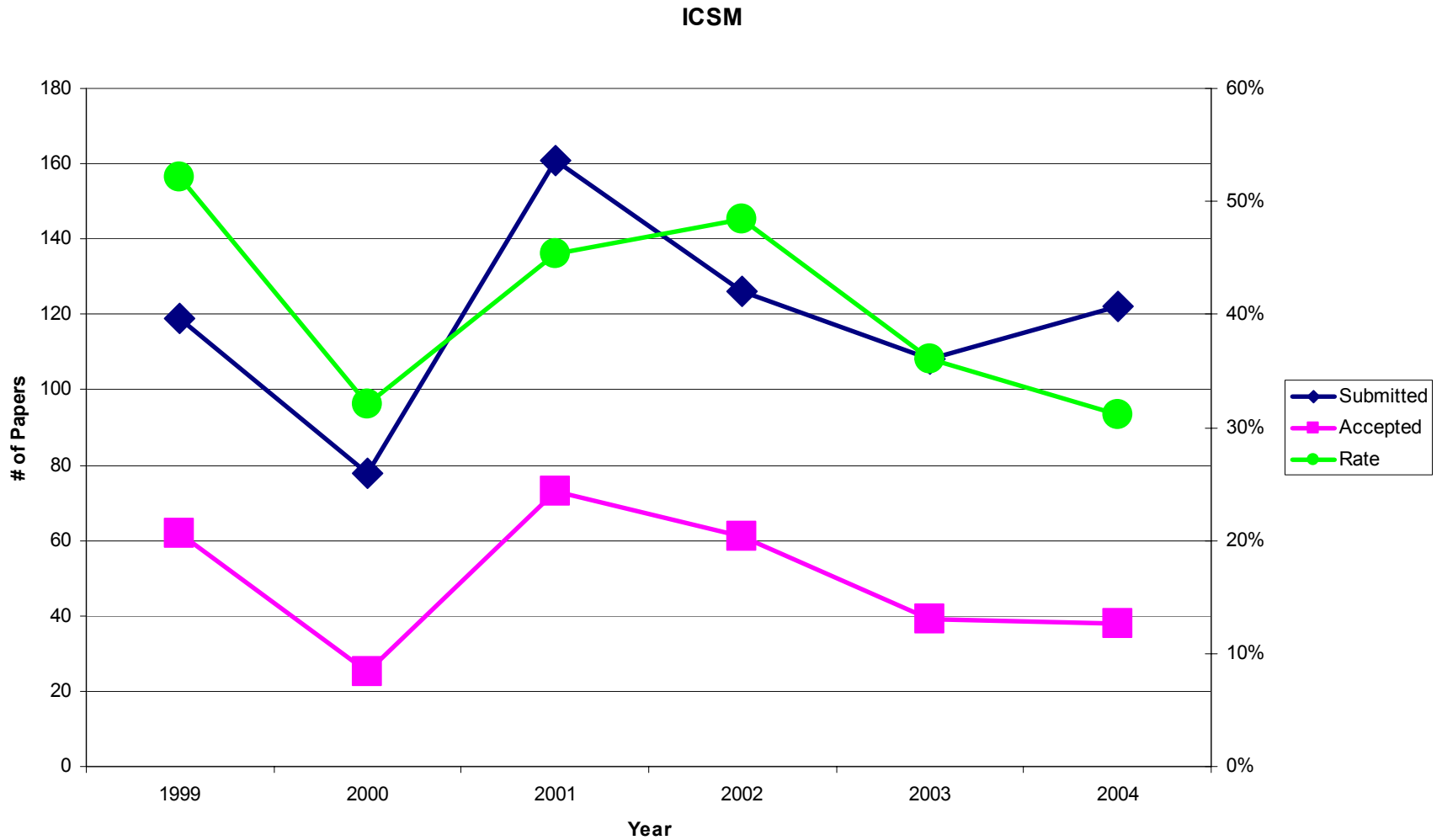
GLSVLSI (2002-2005)



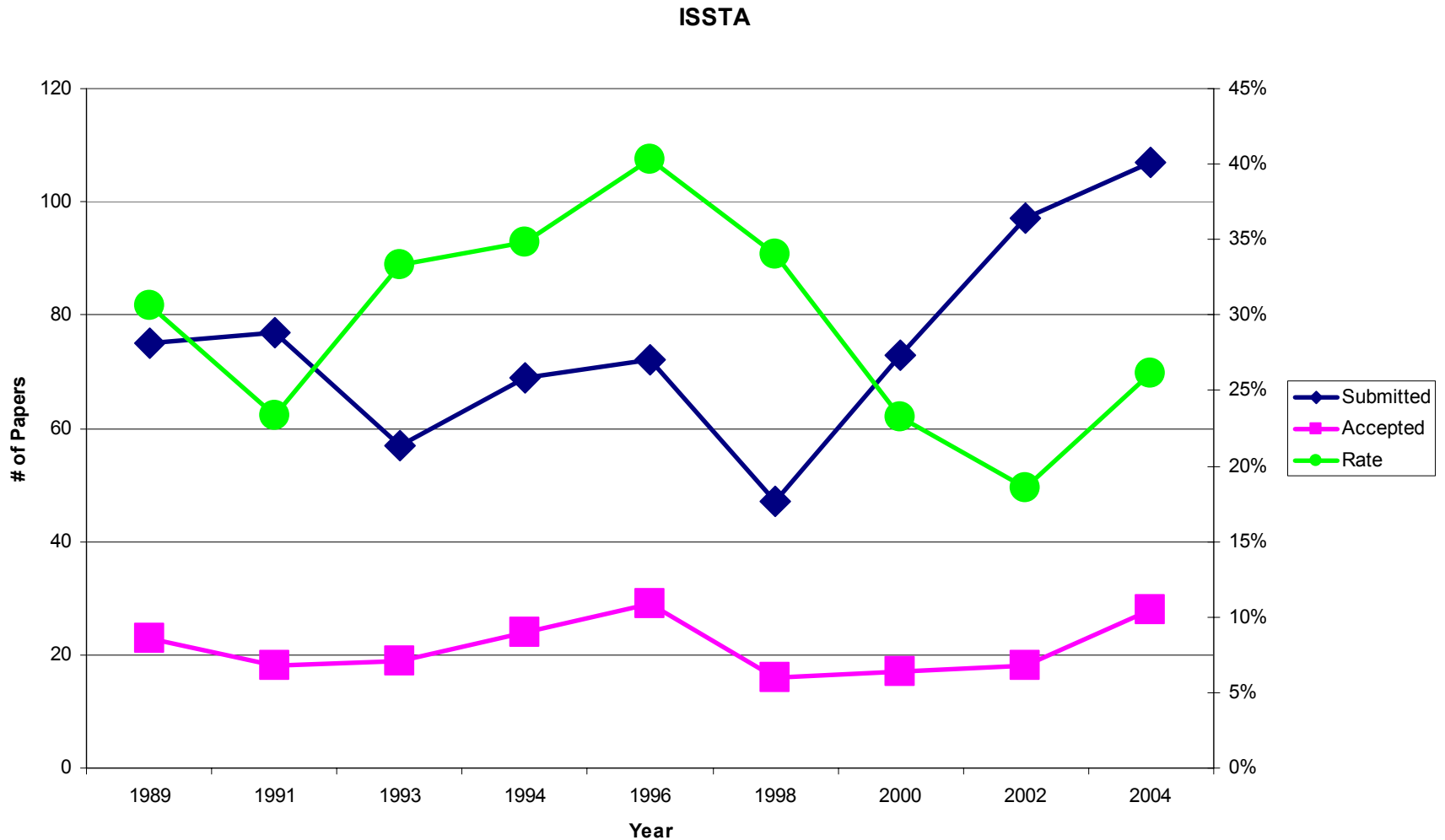
ICSE (1992-2005)



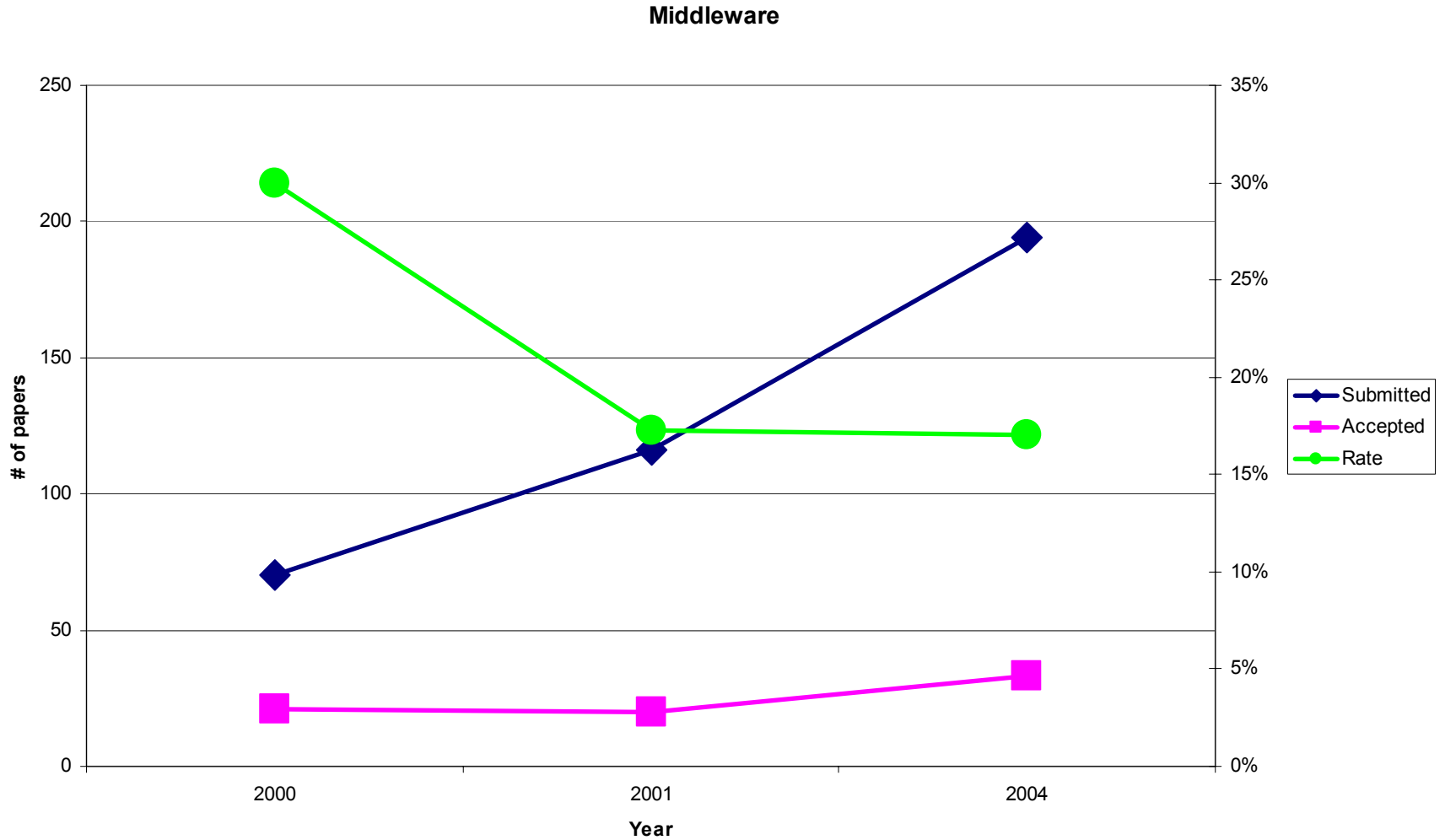
ICSM (1999-2004)



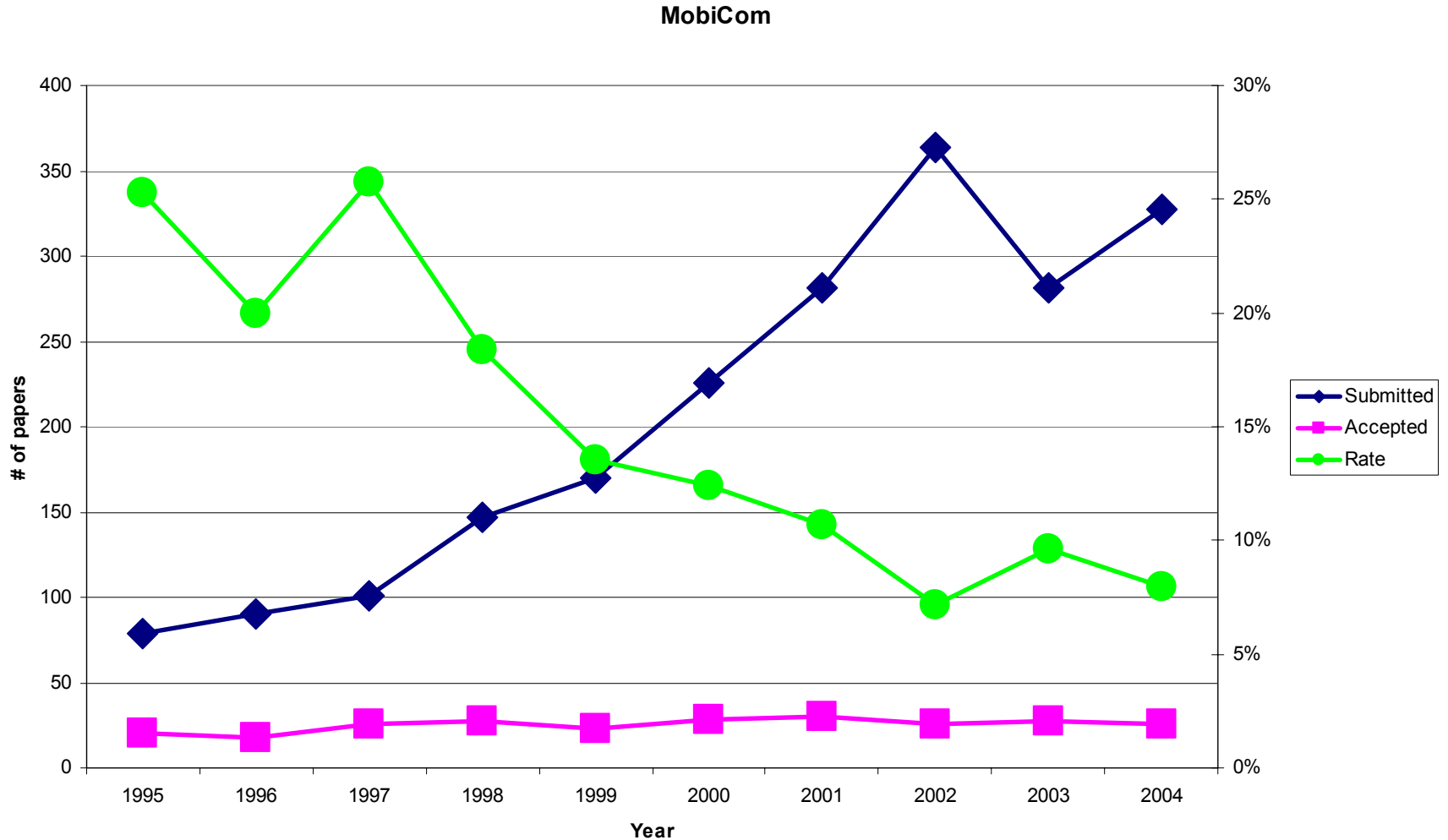
ISSTA (1989-2004)



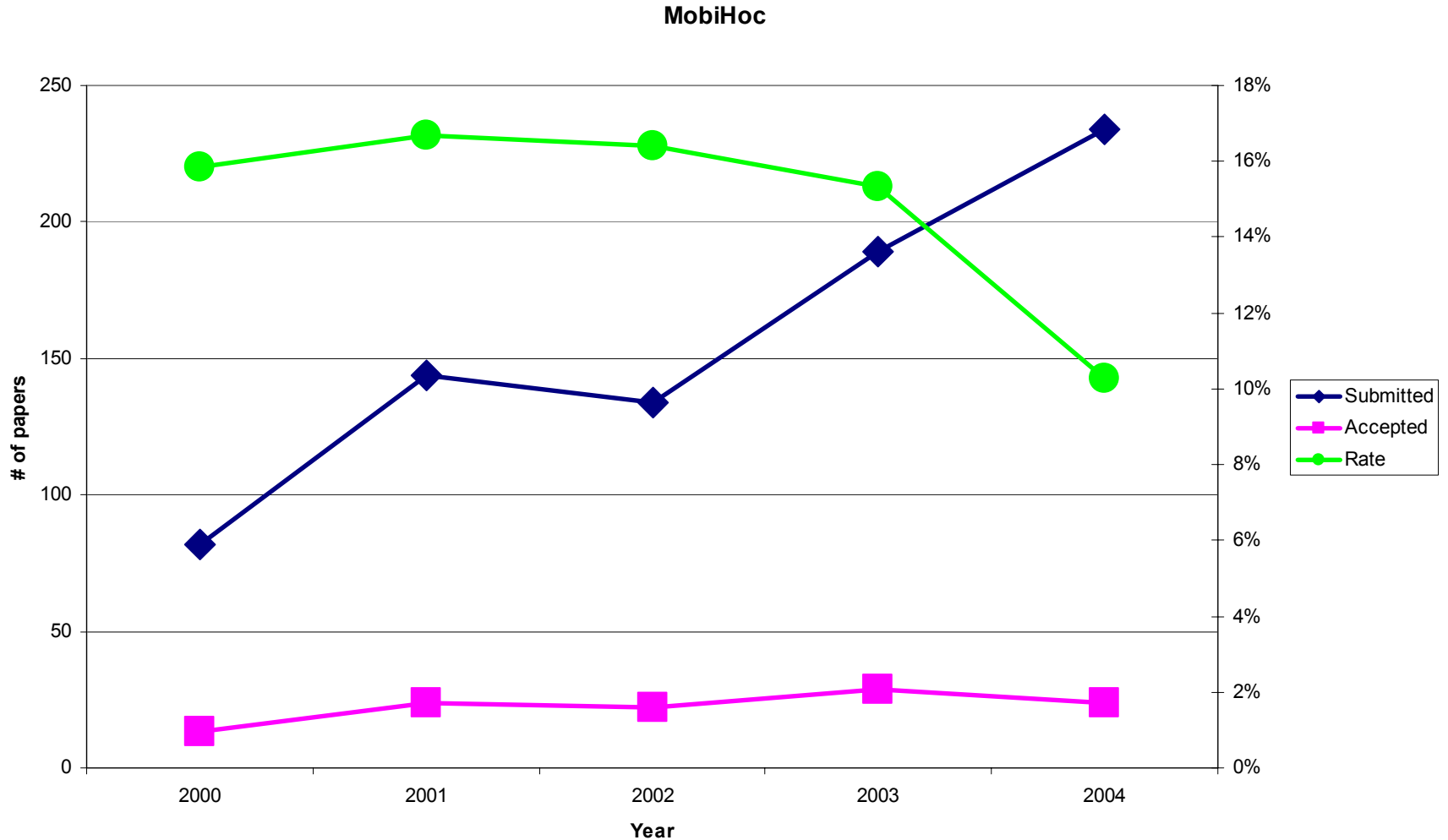
Middleware (2000-2004)



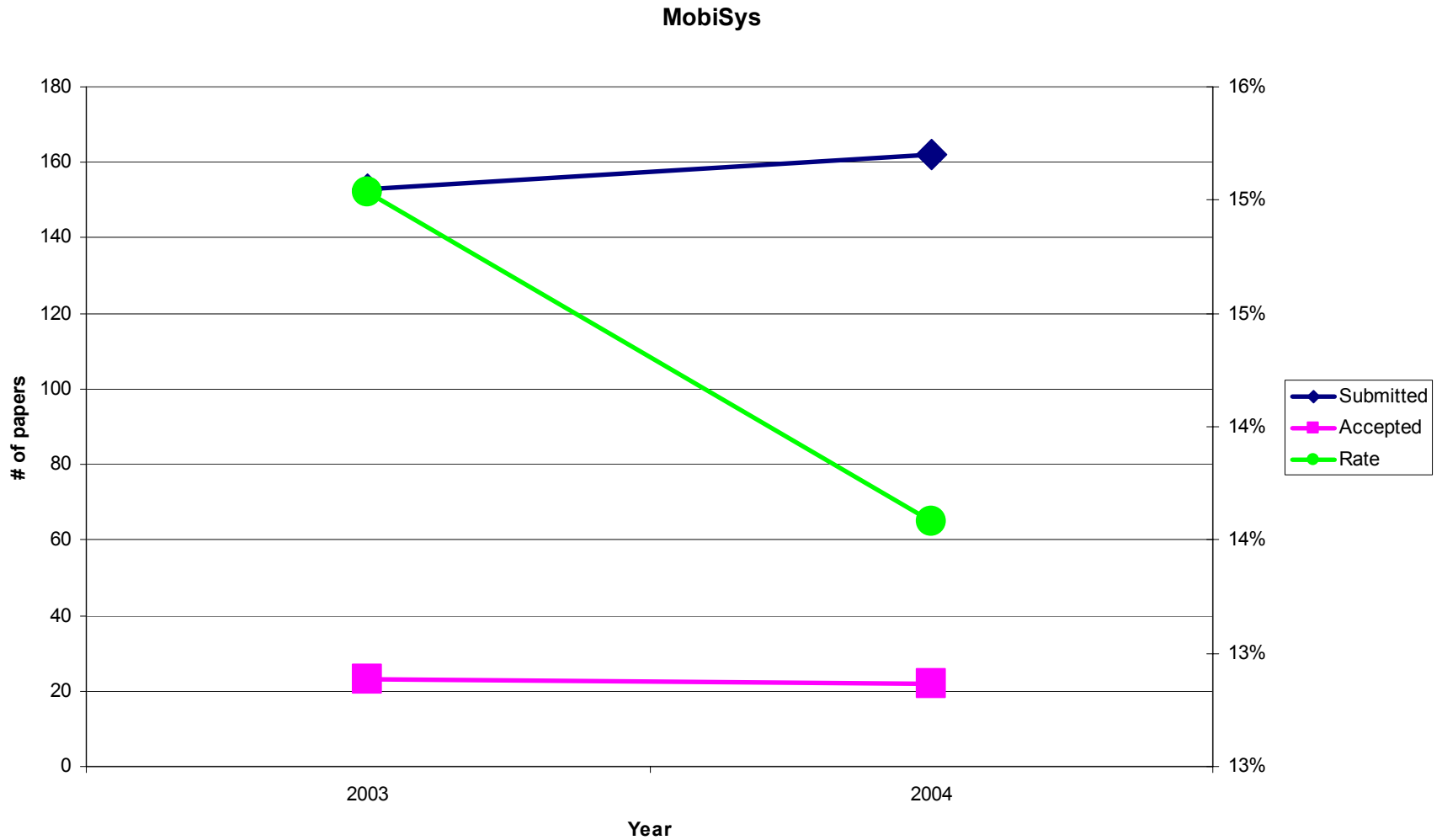
MobiCom (1995-2004)



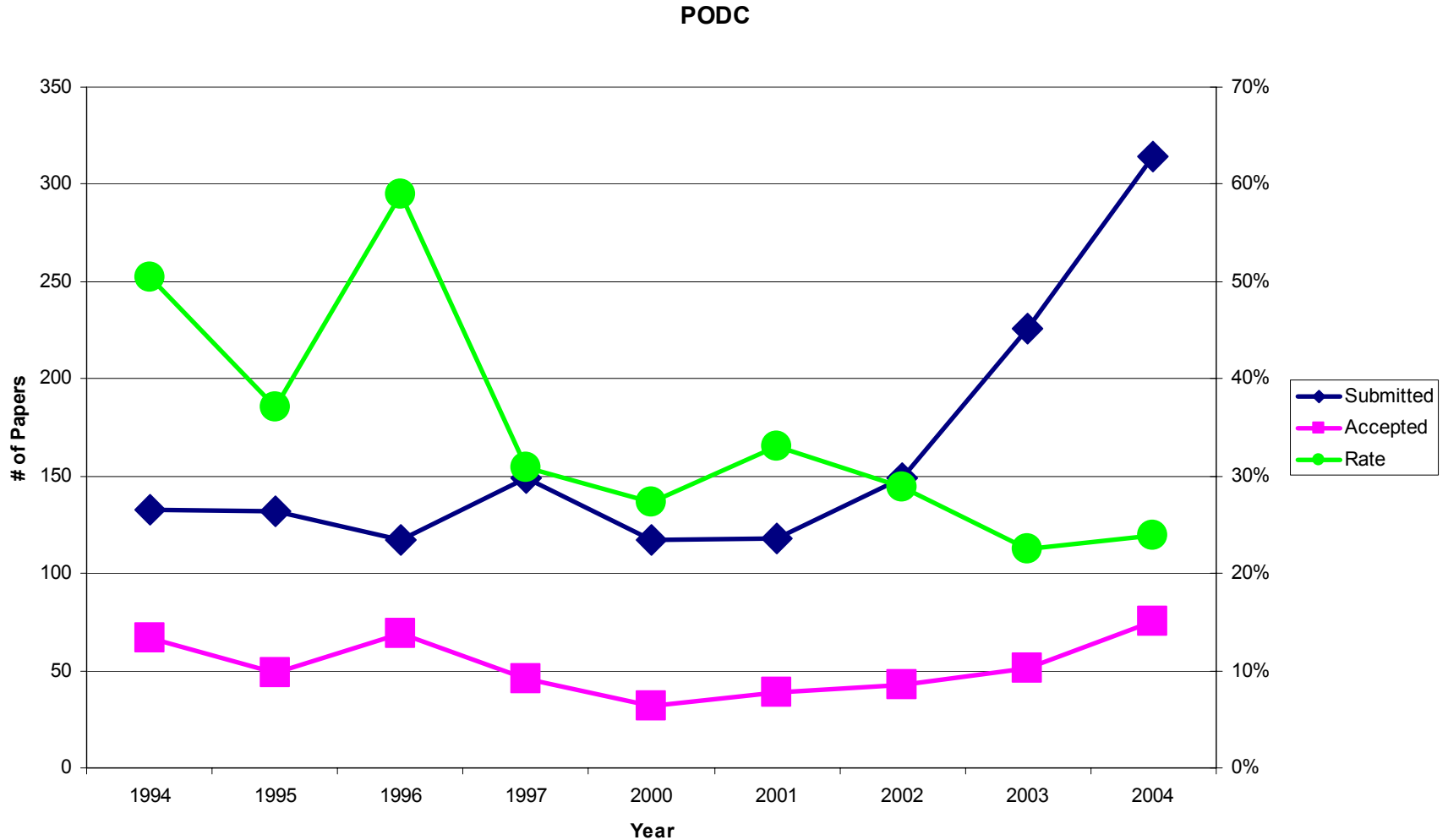
MobiHoc (2000-2004)



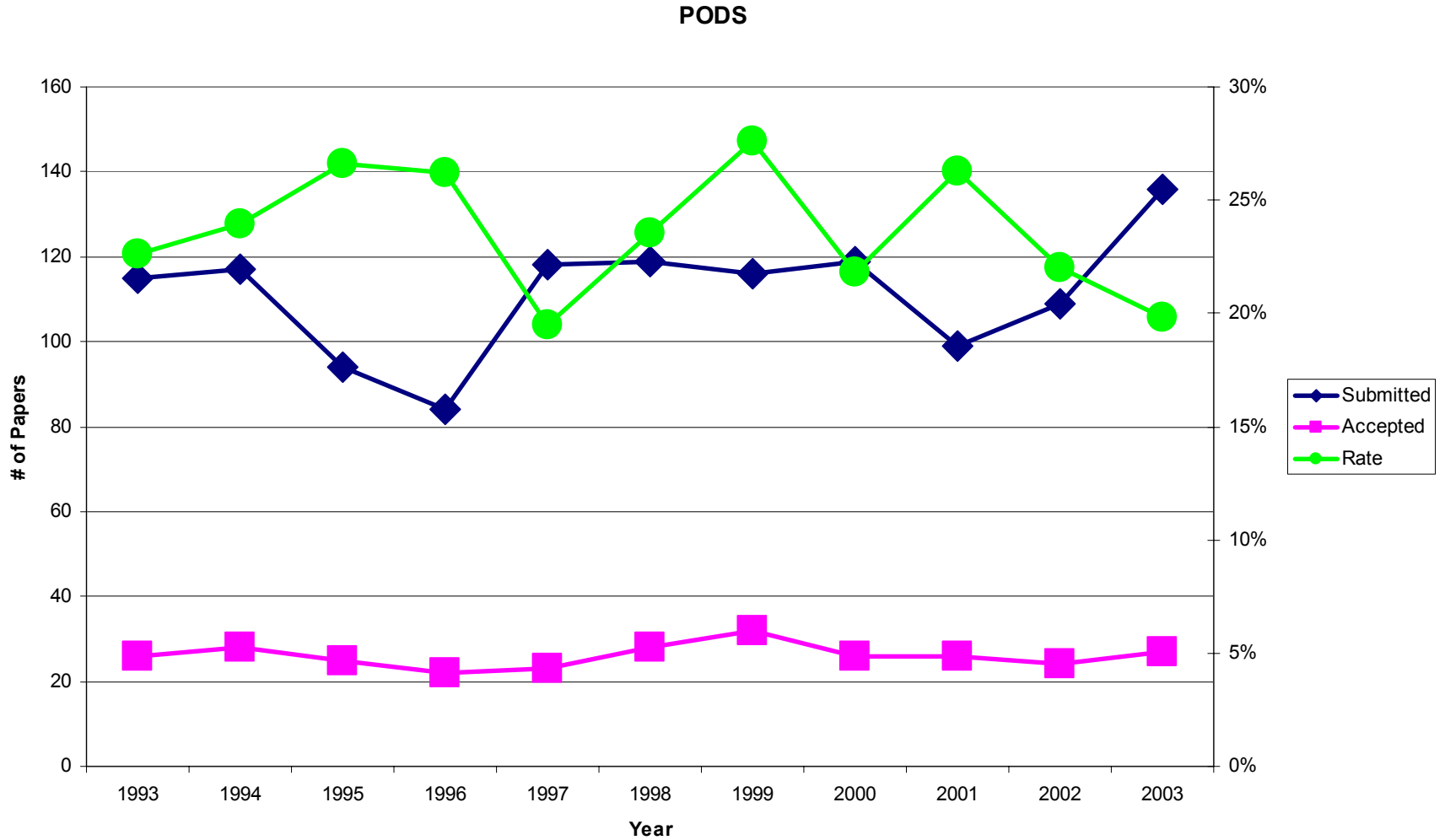
MobiSys (2003-2004)



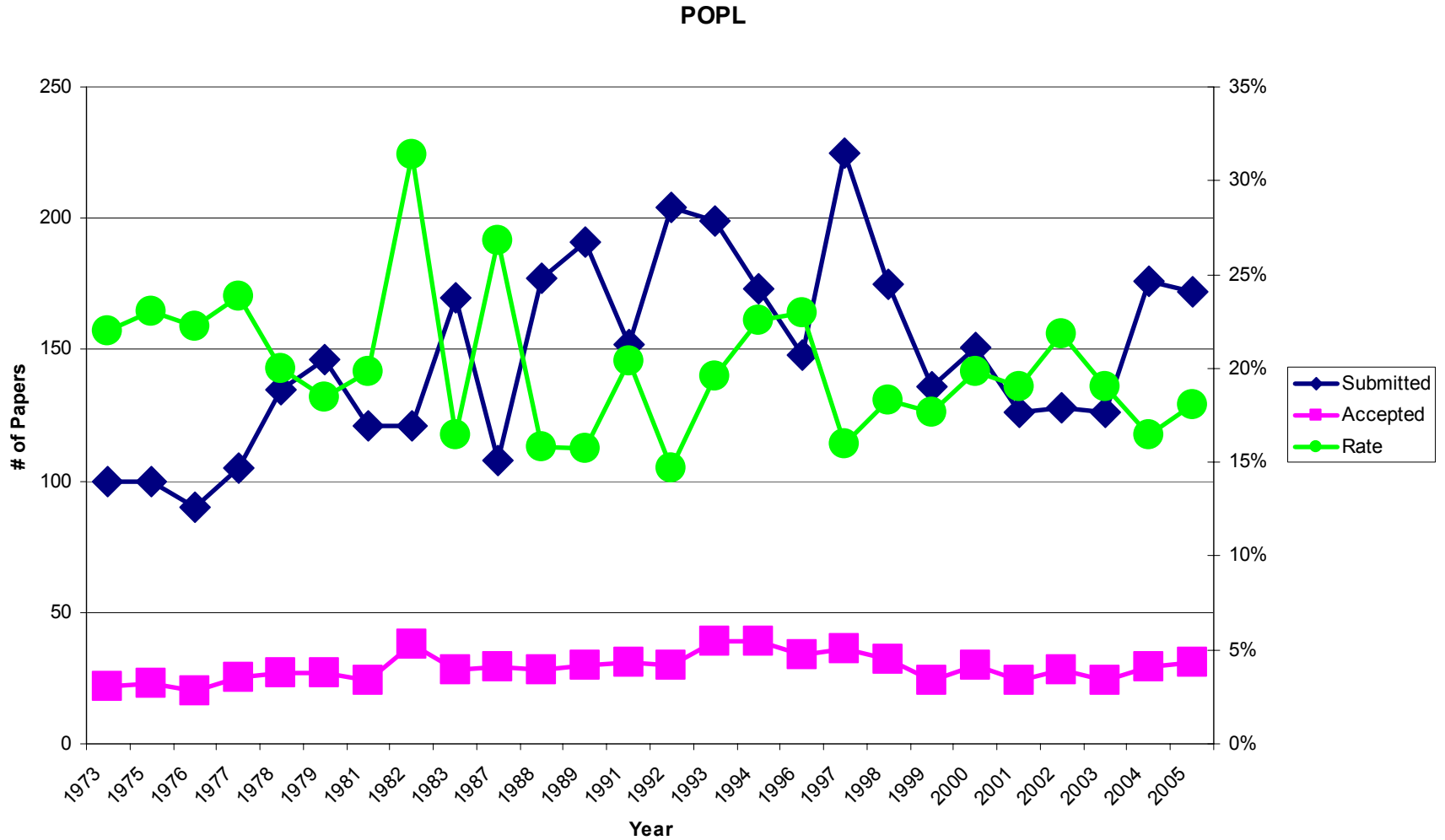
PODC (1994-2004)



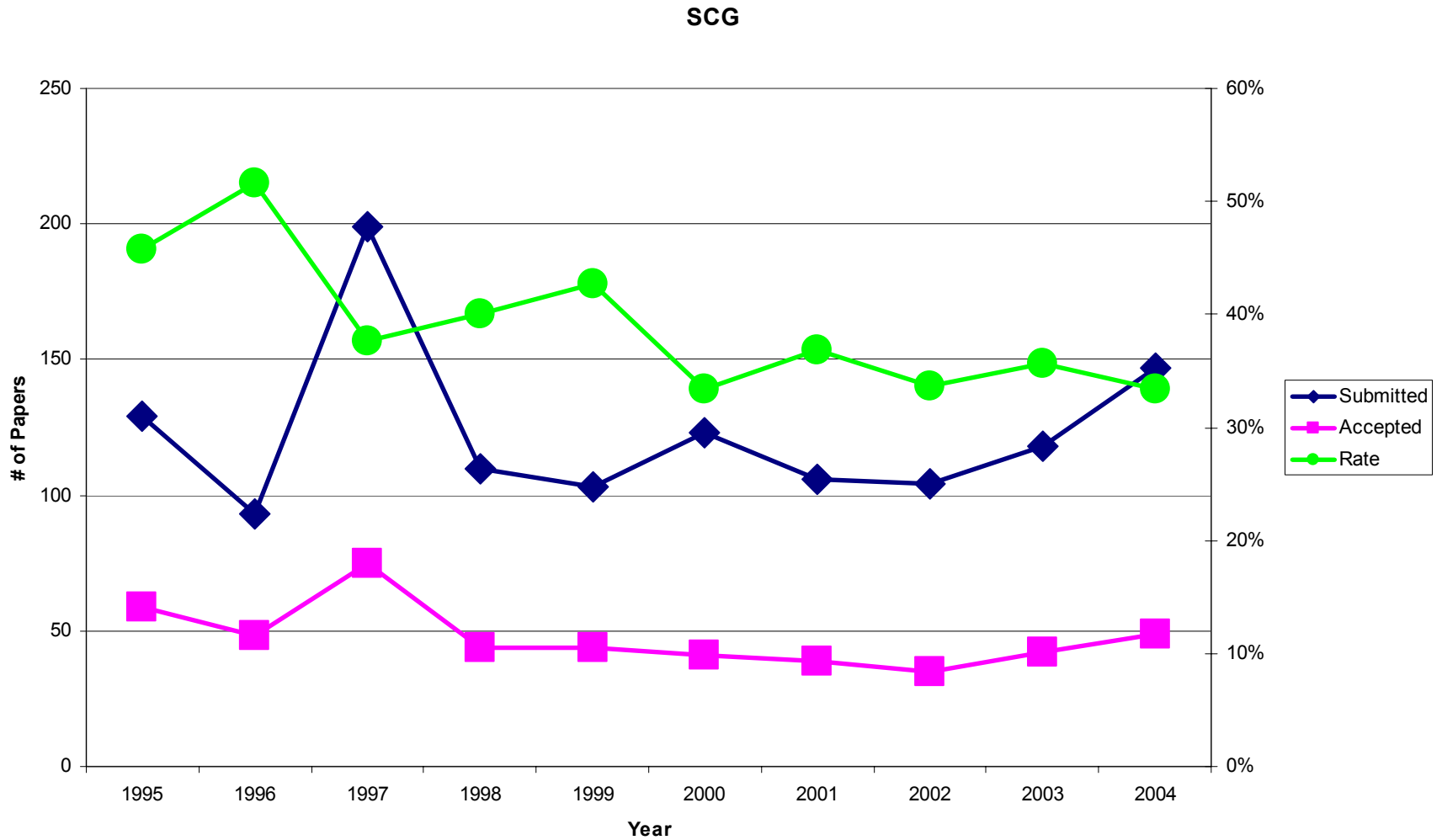
PODS (1993-2003)



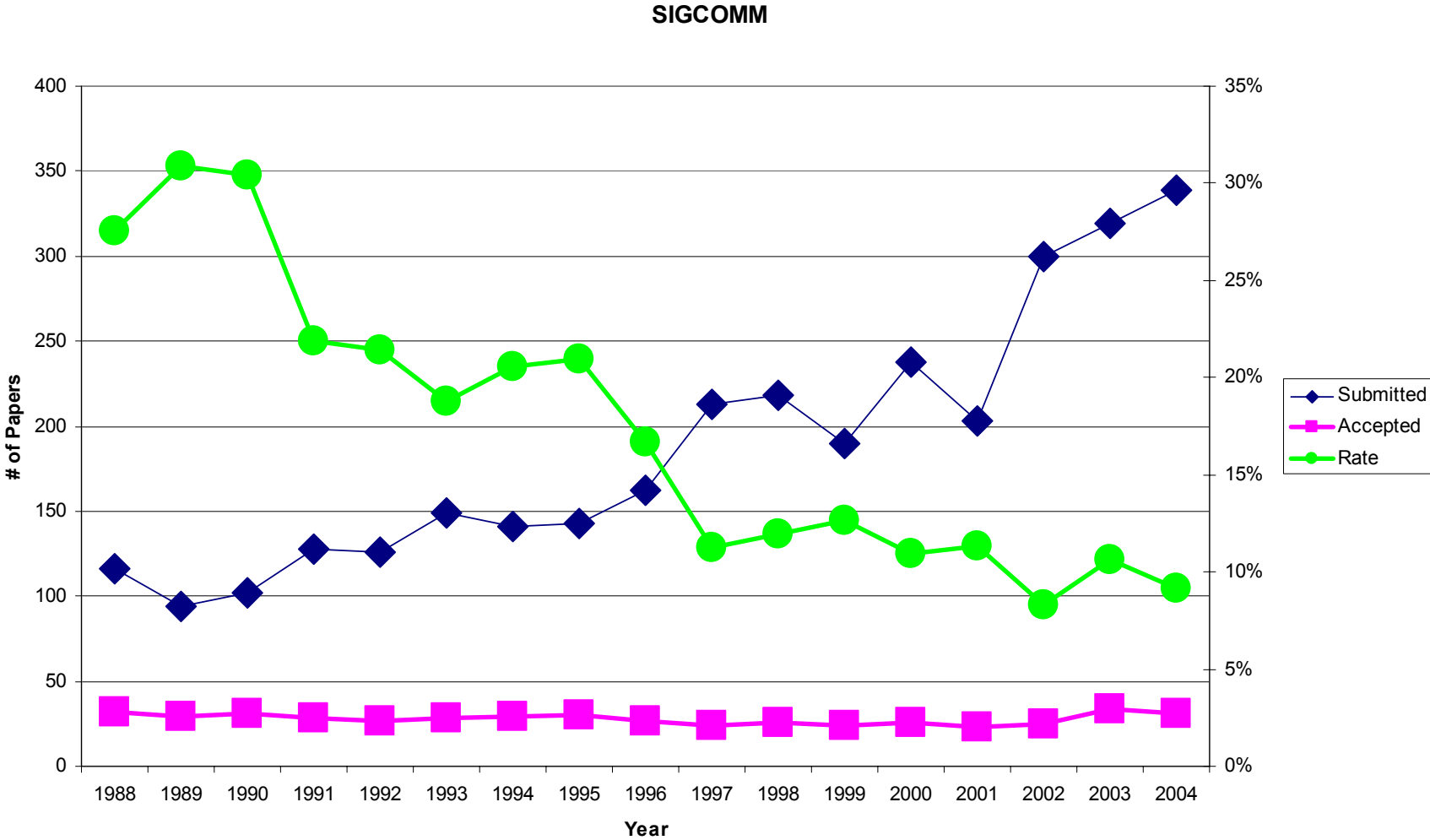
POPL (1973-2005)



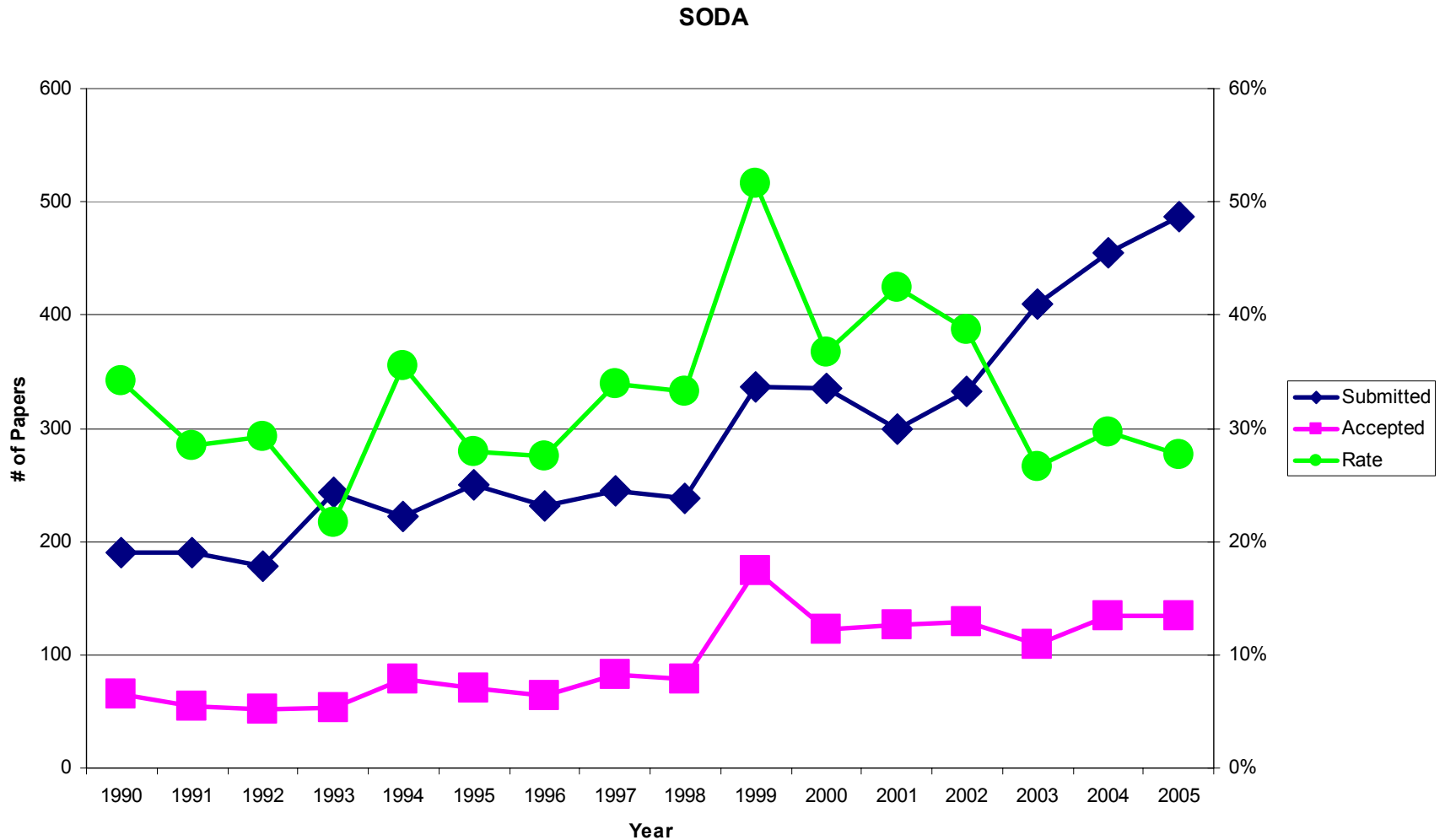
SCG (1995-2004)



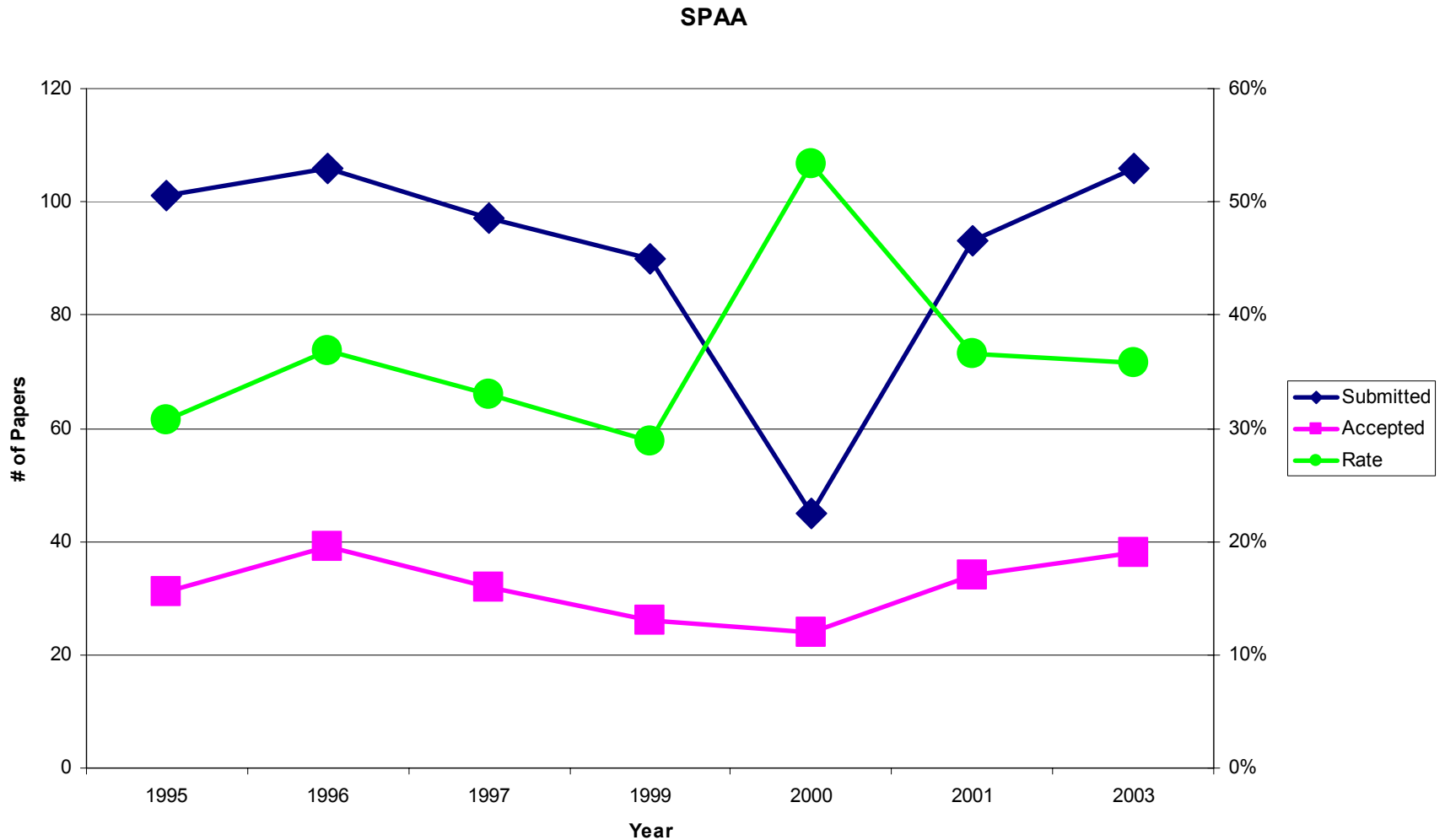
SIGCOMM (1988-2004)



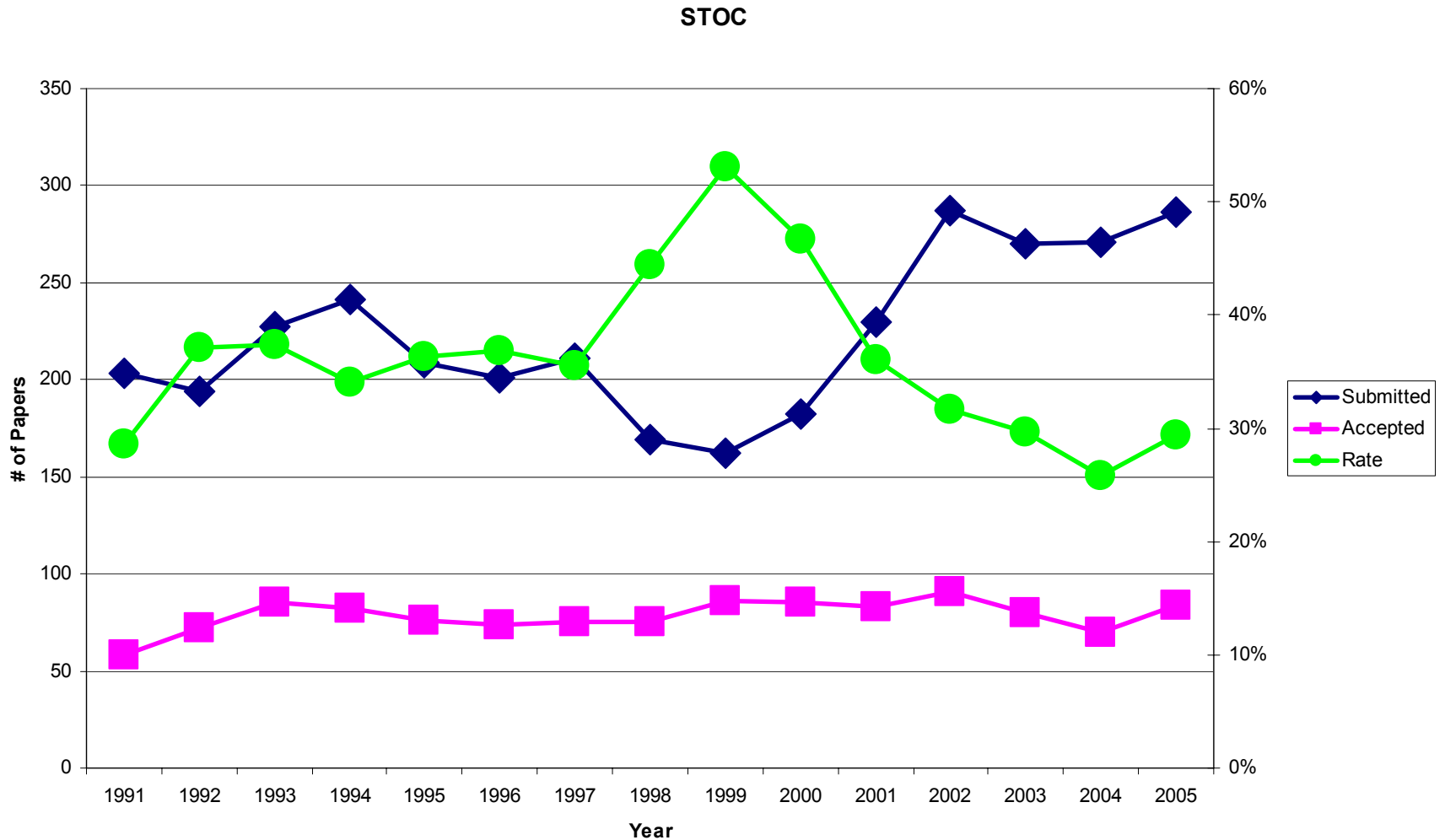
SODA (1990-2005)



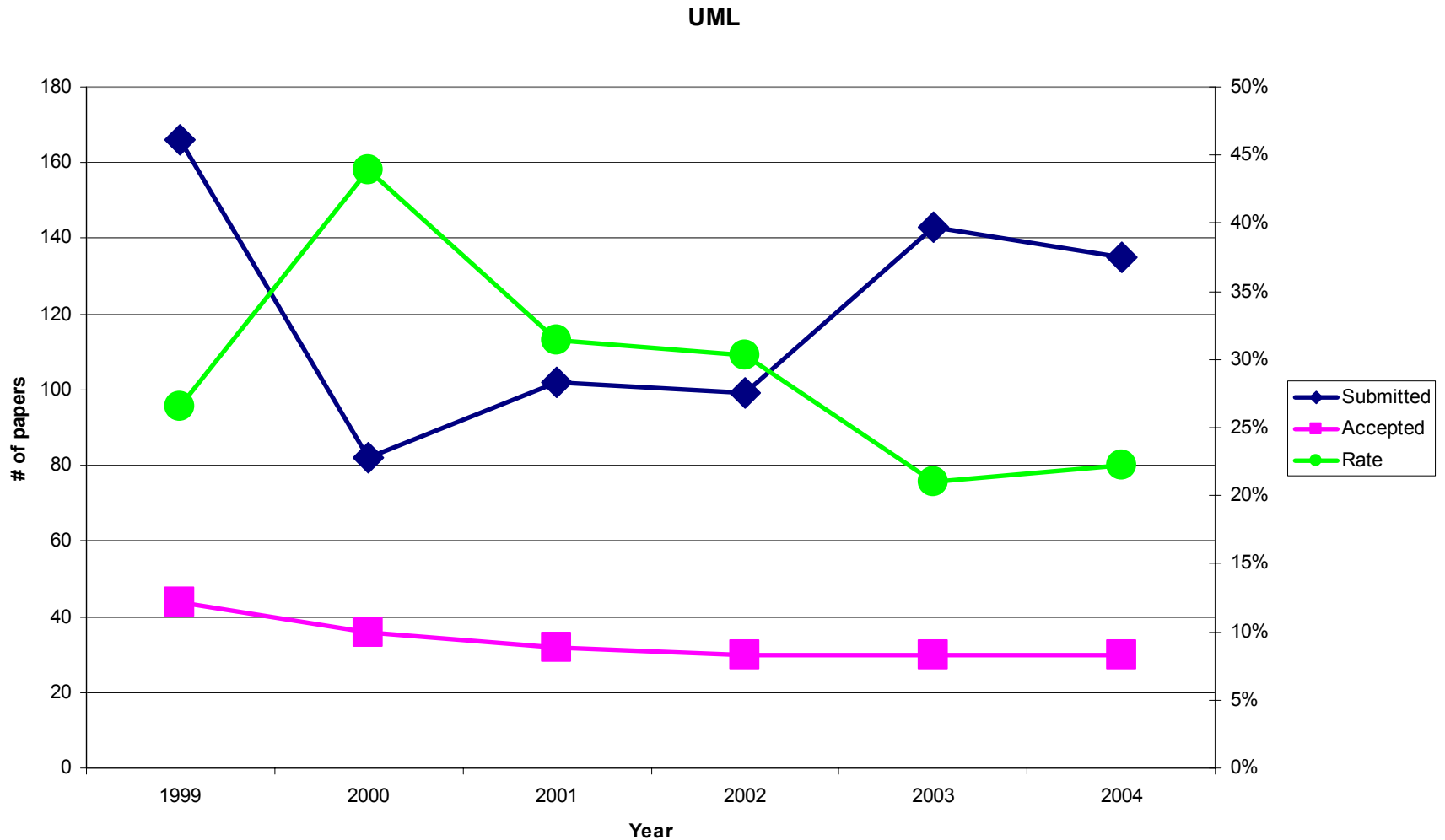
SPAA (1995-2003)



STOC (1991-2005)



UML (1999-2004)



UAI (1992-2004)

Uncertainty in AI

