

Journal of Artificial Intelligence Research: 2007 Annual Report

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Abstract

We are pleased to present the annual report on the status of JAIR. The report covers the activities of the journal from 1st January 2006 to 1st Oct 2007.

Executive summary

Moshe Tennenholtz stood down as Editor-in-Chief on 1st January 2007. Our many thanks to Moshe for leaving the journal in robust health. Toby Walsh took over from Moshe as Editor-in-Chief, and Adnan Darwiche took over as Associate Editor-in-Chief. Adnan will take over from Toby as Editor-in-Chief on 1st January 2009 when Toby steps down after the usual two year term.

The journal published 46 papers in 2006 compared to 39 in 2005. So far in 2007, we have published 31 papers. However, we expect to publish about the same number of papers as 2006 by the year end. In 2006, we received 248 submissions, slightly down from 291 in 2005. Given the current submission rate, we expect about 285 submissions in 2007, approximately 15% up on 2006.

Due to IJCAI's unusual timing in January 2007, the last 12 months have seen the announcement of two IJCAI-JAIR best paper prizes. This is awarded to an outstanding paper published in JAIR in the preceding five calendar years. During the IJCAI-07 opening ceremony in January 2007, the 2006 prize was awarded to *A Knowledge Compilation Map* by P. Marquis and A. Darwiche. During the AAAI-07 opening ceremony in July 2007, the 2007 prize was awarded to *Efficient Solution Algorithms for Factored MDPs* by C. Guestrin, D. Koller, R. Parr and S. Venkataraman. AAAI has kindly agreed to let us announce the prize at their conference opening ceremony in future odd years, when there is no IJCAI at which to make the announcement. Our thanks to both prize committees for their time and effort in selecting these papers.

Finally, a working party was set up to investigate whether JAIR should adopt the use of DOIs. The committee reported back enthusiastically, provided we could find a lightweight mechanism that did not place a burden on our production staff. We are currently in discussion with AAAI (who publish the hardcopy via AAAI Press) and ACM (who may be willing to register DOIs for us in return for including JAIR in their Digital Library). Our thanks to Mike Wooldridge and the other members of this working party for their valuable input.

The remainder of the report gives more detailed statistics about the journal's activities. For more information or for any comment, please feel free to contact either one of us.

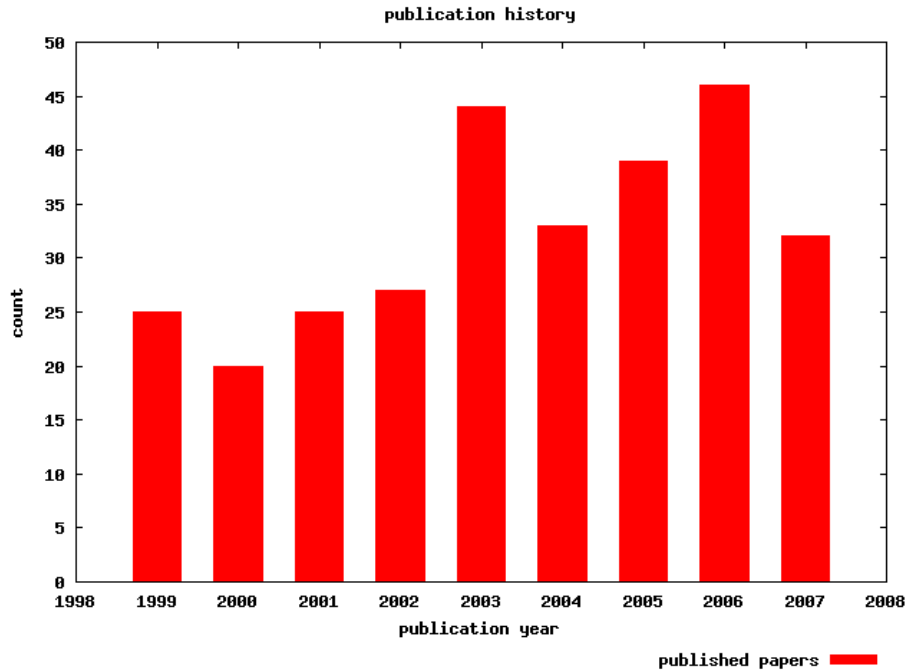


Figure 1: Published papers in JAIR by publication date.

Publication statistics

We published 46 papers in 2006, up from 39 in 2005. So far in 2007, we have published 31 papers. We also have 9 papers in the final stages of production which will appear before the year end. In addition, there are 7 other papers accepted subject to minor revisions. We therefore expect to publish about the same total number of papers in 2007 as in 2006.

As some of the later graphs will show, the time for the final version of papers to appear online has been growing. We have taken steps to address this, and have been attempting to stream-line our production steps. We have also introduced a new email address, `jair.production@cse.unsw.edu.au` for all correspondence once a paper is accepted.

We observed that many authors have not been sending in their final copy till the end of the 3 month deadline between acceptance and final copy. We have therefore reduced this deadline to 2 months. We are monitoring the impact this has on our production speed. We note that no authors have had difficulty meeting the new reduced 2 month deadline since it was introduced in July following the JAIR editorial board meeting at AAI-07.

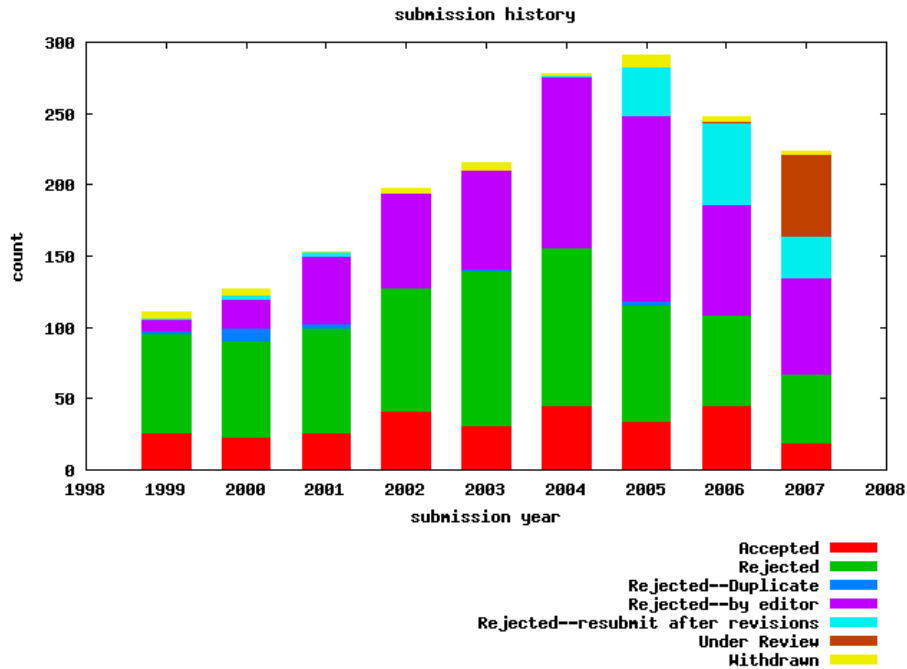


Figure 2: Submitted papers in JAIR by submission date.

Submission statistics

As predicted in our previous annual report, the number of submissions in 2006 fell back slightly to 248 from 291 in 2005. The reduction appears to be largely due to a reduction in the number of summary rejects which fell from 130 in 2005 to 77 in 2006. The reduction coincides with the introduction of an online questionnaire on our web submission page that we hoped would reduce the number of submissions rejected without review. In 2007, we have received 214 submissions. Based on this submission rate, we would expect to receive 285 submissions by the year end, nearly 15% up on 2006.

The small drop in submissions from 2005 to 2006 may be due to a number of factors. 2006 also saw a very long conference season, with IJCAI-07 submissions and reviewing taking us into the middle of the year. This may have reduced the number of journal papers written. However, since submissions are again picking up, we are not unduly concerned.

Given the reduction in the number of papers rejected without review, the acceptance rate for all submissions increased in 2006 to 18% from 12% in 2005. Of papers sent out for review, the acceptance rate in 2006 also increased slightly to 27% from 23% in 2005. However, this is still less than the acceptance rate for reviewed papers of 29% in 2004 and 32% in 2002. If we do not count

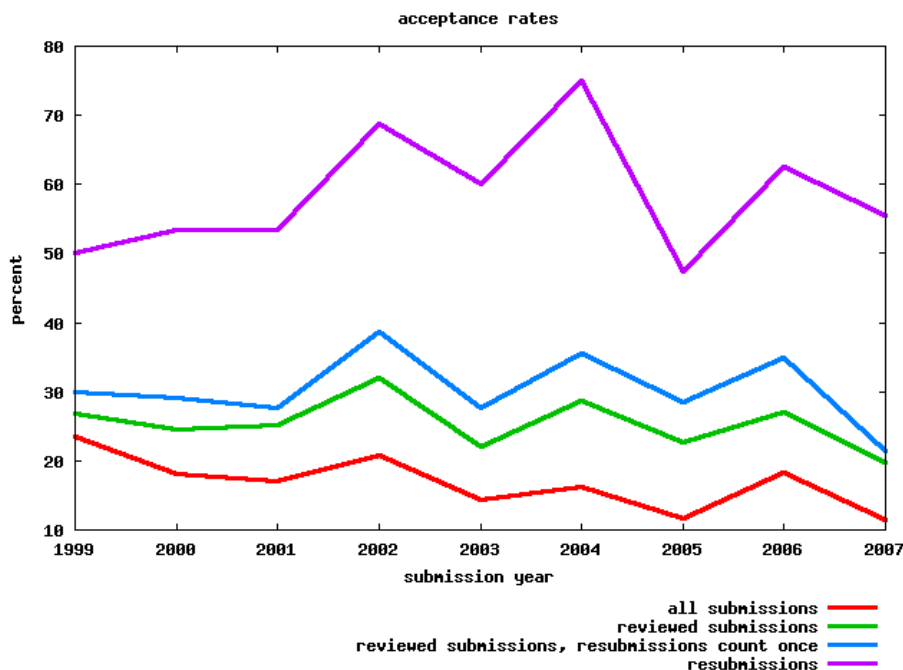


Figure 3: Acceptance rates by submission date.

resubmissions, the acceptance rate in 2006 rises to 34%, again up from 29% in 2005, but still less than the rate of 39% in 2002. For resubmitted papers, the acceptance rate was 62% in 2006, again up from 47% in 2005, but still less than the rate of 69% in 2002.

It is too early to draw conclusions for acceptance rates in 2007. Rates tend to increase towards the end of the year as papers tend to be rejected quicker than they are accepted. Over the longer term, acceptance rates are noisy and there does not appear to be a significant trend up or down.

Regional statistics

As is usual, we received most of our submissions in 2006 from Europe and North America. Although it is too early to be sure, 2007 appears to be witnessing a drop in submissions from North America. This would be of concern if it persists. We saw submissions from Asia decrease for the first time in 2006. However, the number of papers published from Asia remained constant. To the pleasure of the current EiC, submissions from Australia/Pacifica have increased rapidly in 2007, though they were starting at a low baseline.

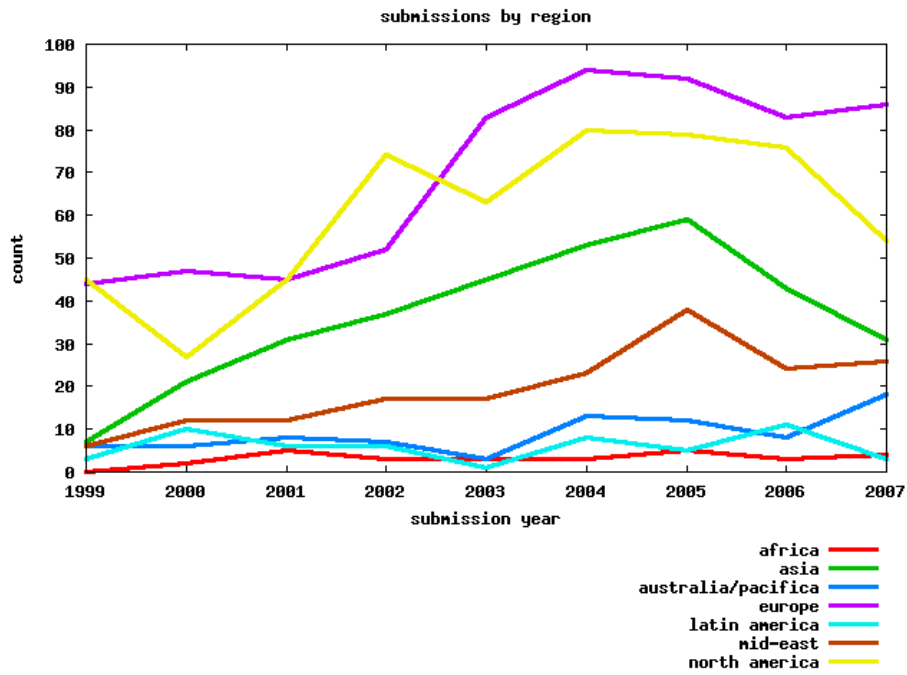


Figure 4: Submissions by region organized by submission date.

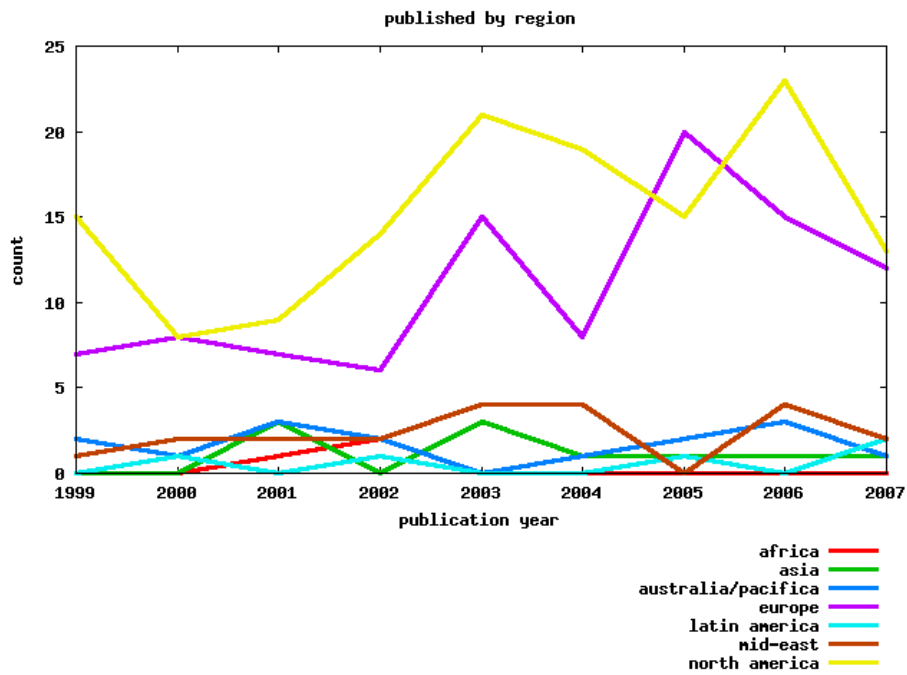


Figure 5: Publication by region organized by publication date.

Subject statistics

As in previous years, machine learning was the most topic for submitted papers in 2006 (52 papers). However, search/constraint satisfaction had 40 submissions, and knowledge representation was not far behind with 38 papers, and multi-agent systems with 36 papers. Other popular topics were NLP with 19 submissions, and planning/scheduling with 16. One topic recorded a significant drop in the number of submissions: neural networks which dropped to 8 submissions from 33 in 2005.

Many of the papers appearing in the Special Track on the 4th International Planning Competition appeared in 2006. For this reason, the most popular topic for papers published in JAIR in 2006 was planning/scheduling (13 papers). However, search/constraint satisfaction (10 papers), machine learning (6 papers), knowledge representation (5 papers), and multi-agent systems (5 papers) were also popular topics.

Temporal statistics

Thanks to the tireless efforts of our Associate Editors, the time from submission to a decision for reviewed papers dropped in 2006 from 96 days to 92 days. The processing time looks set to drop again in 2007. It currently stands at just 81 days. There was unfortunately an increase in the average time to return a decision across all submissions from 56 days in 2005 to 65 days in 2006. To address this, the EiC and AEiC have been processing summary rejects more quickly. The average time to return a decision has therefore dropped in 2007. It currently stands at just 50 days.

For papers that we go on to publish, the average time to review dropped in 2006 to 89 days compared to 105 days in 2005. In 2007, papers being published have taken just 83 days to be reviewed. Again, many thanks to our Associate Editors. The time from decision to publication increased slightly from 184 days in 2005 to 189 days in 2006. However, we are concerned to report that the time from decision to publication has increased to 210 days so far in 2007. Some of this increase can be attributed to one-off factors, including a member of the production staff taking maternity leave. Nevertheless, it is clear there are bottlenecks in our production process that need to be addressed. We have been looking at methods to ensure a more stream-lined process. In addition, we have reduced the time authors are given to do any minor revisions since not all of the delay is in production. We are monitoring this issue closely and will take other measures that prove necessary to bring this time down.

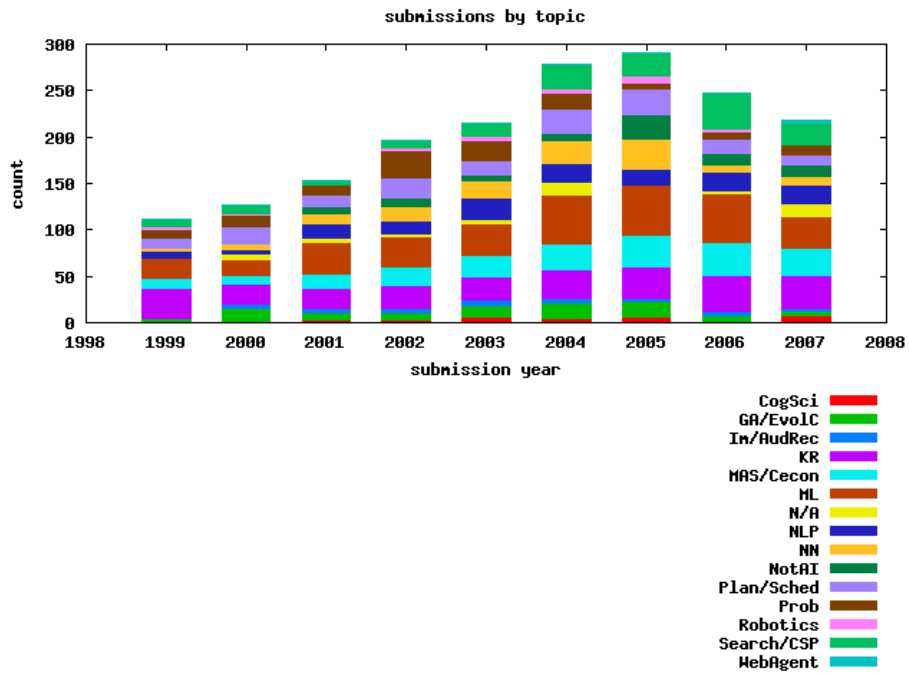


Figure 6: Submissions by topic organized by submission date.

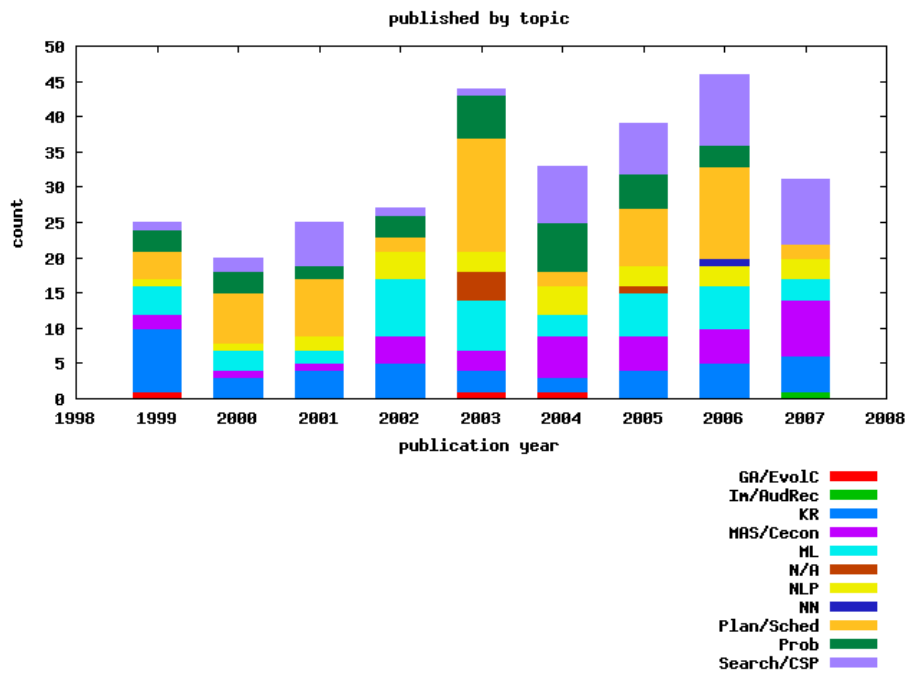


Figure 7: Publications by topic organized by publication date.

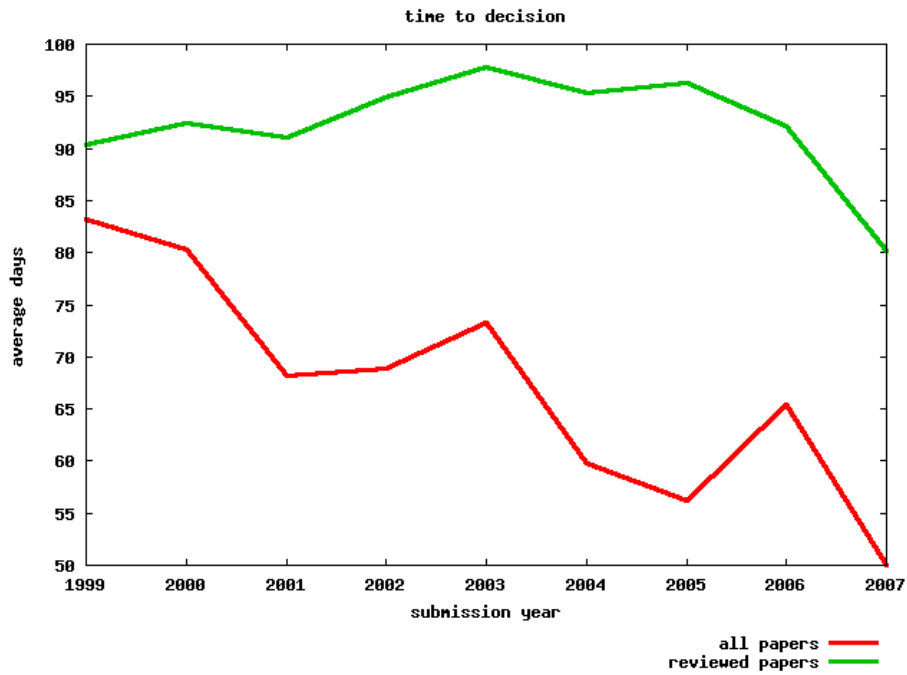


Figure 8: Time to a decision by submission date.

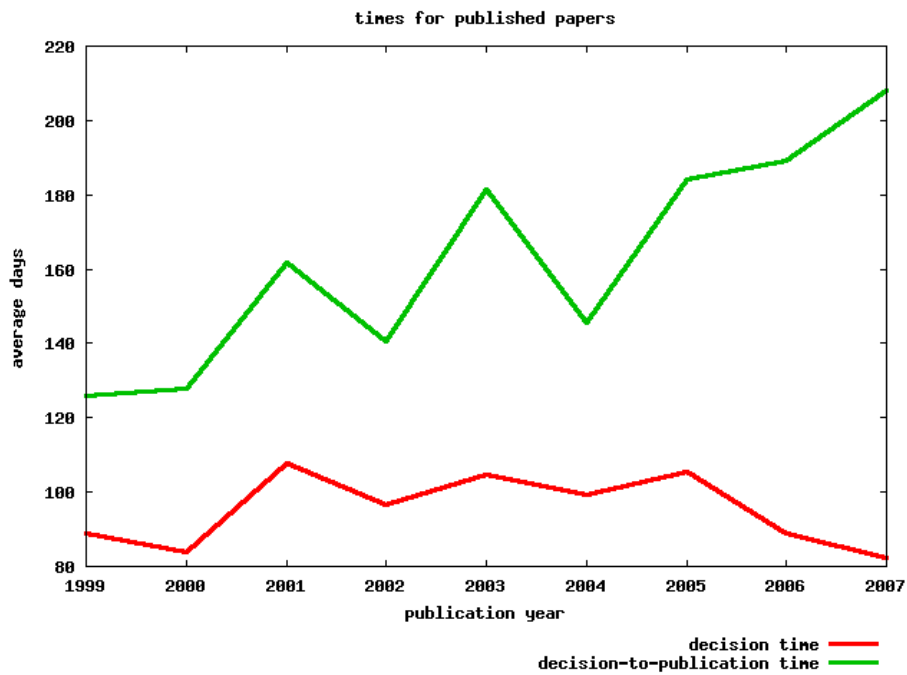


Figure 9: Time to decision for published papers, and time to publish after a decision has been made, by publication date.