



# TF-AAS newsletter

IEEE  
computer society  
60<sup>th</sup> anniversary

## Issue 5: June/July 2006

The *TF-AAS newsletter* is produced as a focal point for news concerning the (related) activities of the IEEE Computer Society Autonomous and Autonomic Systems Task Force. If you have any items for the next issue please contact [r.sterritt@ulster.ac.uk](mailto:r.sterritt@ulster.ac.uk)

## ICAC 2006



by **Simon Dobson**

ICAC'06 was held in sunny -- yes, sunny! -- Dublin, Ireland in June. Around 130 people came to UCD Dublin's Belfield campus to share results and find new opportunities for further collaboration.



The 3<sup>rd</sup> IEEE International Conference on Autonomic Computing (ICAC'06) took place in Dublin, Ireland from June 12<sup>th</sup> - 16<sup>th</sup> <http://www.autonomic-conference.org/>

The programme was certainly packed: 26 full papers and 16 posters over three days kept everyone busy. There were also keynote presentations from John Strassner of Motorola (see letters section) and Karl Aberer of EPFL, plus further contributions from Alan Ganek of IBM and Martin Curley of Intel. The conference ran four tutorials on the Monday, and four satellite workshops on Friday were very well-attended. The social programme was full too, with a wine reception, a conference dinner with traditional Irish music and dancing, and a number of other less formal Guinness-tastings and pub-crawls!

ICAC'07 is scheduled for Jacksonville, Florida.

## SelfMan 2006

by **Alexander Keller & J.P. Martin-Flatin**

We had 43 participants, plus about 15 people during the joint SelfMan/DANMS industrial panel. SelfMan was the largest ICAC workshop.

We received 51 papers from 21 countries, of which 12 were selected as full papers and 11 presented (the 12th speaker showed up but had to leave at short notice). Two short papers out of 3 were presented. We received very positive feedback from the audience, especially for the panel. For those of you who could not attend, the proceedings are now available from Springer (LNCS 3996): <http://www.springer.com/east/home/generic/search/results?SGWID=5-40109-22-173660905-0>

### LETTERS

#### Using Autonomic Principles to Manage Converged Services in Next Generation Networks

by **John Strassner**



**Abstract:** *This letter discusses that while Next Generation Networks are an active field of study, effective management of these complex networks is still an open research problem. Applications of next generation networks, such as converged services, further exacerbate the difficulty of their management. This is due largely to the dramatically increased business, system, and operational complexity of both the networks and the converged services.*

*Autonomic networks use business goals to dynamically adapt the services and resources that they provide as their environment changes, and as demands place upon them fluctuate. Hence, it is natural to consider using autonomic principles to manage next generation networks and the services that run on them. This talk provided a brief overview of next generation networks, examined converged and other next generation services, and formulated a methodology and architecture, based on autonomic principles and semantics, to manage next generation networks and services.*

Read the full article at: <http://tab.computer.org/aas/newsletter/2006-4/2006-4-tf-aas-letters.pdf>

## TF Chair's Column

Welcome to the June-July 2006 issue of our TF newsletter; which marks the 1<sup>st</sup> Anniversary of the TF-AAS.

June and July has been a very busy period with our community's prestigious conference series, ICAC, taking place in Dublin, Ireland in June with several excellent workshops co-located including SelfMan.

The AAS research area continues to influence the Space Industry and was a focus in July at SMC-IT and the mini-workshop AA-SES-2.

The first Latin American AAS event (LAACS) also took place in July, a report will feature in the next issue of the newsletter.

Also, in this issue we continue with our *letters section* on the theme of expanded AAS keynote presentations. John Strassner expands his keynote talk given at ICAC'06. in Dublin.

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### New Publication:



IEEE Trans SMC: Vol. 36 Issue 3, May 2006. Special Issue on Engineering of Autonomic Systems

<http://ieeexplore.ieee.org/xpl/tocresult.jsp?isYear=2006&isnumber=34177>



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## SMC-IT 2006



by Larry Bergman & Sven Grenander

The 2<sup>nd</sup> IEEE International Conference on Space Mission Challenges for Information Technology (SMC-IT) was held in the beautiful city of Pasadena, California bringing together systems designers, engineers, scientists, practitioners, and space explorers for the objective of advancing information technology for space missions.

We were very fortunate to have an absolutely stellar cast of Keynote Speakers, spanning nearly every corner of the space mission IT spectrum. Prominent among these is Dr. Vint Cerf, co-Father of the Internet and Chief Internet Evangelist, Google. He spoke on the future of the Inter-Planetary Network. The others were no less inspiring stirring imaginations about future mission IT challenges and technology directions.

Proceedings available at:

<http://icmdl2.computer.org/persagen/DLabsToc.jsp?resourcePath=icmdl/proceedings/&toc=comp/proceedings/smc-it/2006/2644/00/2644toc.xml>



SMC-IT website is at  
<http://smc-it.jpl.nasa.gov/>

## AA-SES-2



The 2nd Autonomous & Autonomous Space Exploration Systems (A&A-SES-02) workshop was held at SMC-IT. Space missions require the use of complex hardware, software and

embedded systems, often with hard real-time requirements. Most missions involve significant degrees of autonomous behaviour, often over significant periods of time. While missions typically have human monitors, many missions involve very little human intervention, and then often only in extreme circumstances. It has been argued that Space Exploration Systems should be autonomic (self-managing) as well as autonomous (self-governing), (see TFAAS Newsletter issue 4 Apr/May 2006 Letters) and that all autonomous systems should be autonomic by necessity.

AA-SES-3 will be held in Baltimore from March 6-8 2007 as part of SASW-07: <http://www.systemsandsoftwareweek.org/>

## Calendar of Community Activity

This section briefly lists some of the additional activity within the community (both within IEEE and beyond) over the forthcoming months.

### August 2006

& Aug 31<sup>st</sup> : Special Issue Journal on "Self-Managed Networks, Systems and Services" in IEEE e-Transactions on Network and Service Management (eTNSM)  
<http://www.comsoc.org/eTNSM/>

### September 2006

Sept 3-6: 3rd Int. Conf. Autonomic and Trusted Computing (ATC'06), Wuhan and Three Gorges, China  
<http://grid.hust.edu.cn/atc06/>

Sept 4-8, 4th Int. DEXA WS Self-Adaptive and Autonomic Computing Systems (SAACS06), Krakow, Poland.  
<http://cms1.gre.ac.uk/conferences/saacs06/>

Sept 18-21, Int. Conf. Self-Organization and Autonomic Systems in Computing & Communications (SOAS'2006) Erfurt, Germany.  
<http://www.soas2006.org/>

Sept 18-21, ATAC 2006: First International Workshop on Agent Technology and Autonomic Computing, Erfurt, Germany.  
<http://www.netobjectdays.org>

Sept 25-29, Autonomic Networking 2006 incorp: SMARTNET - INTELLCOMM - IWAN - WAC, Paris - France.  
[www.autonomic-net.org](http://www.autonomic-net.org)

Sept 29<sup>th</sup> -Oct 1<sup>st</sup> 2006: IEEE Dependable Autonomic and Secure Computing (DASC'06), Indianapolis, USA  
<http://www.cs.iupui.edu/DASC06/>

## December 2006

Dec 11-13, (cfp 31 July), BIONETICS 2006, 1st International Conference on Bio Inspired Models of Network, Information and Computing Systems, Madonna di Campiglio, Italy, <http://www.bionetics.org/>

Dec 20-23, (cfp ext 31<sup>th</sup> July) 14<sup>th</sup> Int. Conf. on Advanced Computing & Communications (ADCOM 2006). Surathkal, Mangalore, India The theme for ADCOM 2006 is Autonomic Computing  
<http://www.adcom2006.nitk.ac.in>

## January 2007

Jan 11-13, (cfp 31 Aug), CCNC 2007, Special Session on Autonomic Communications, at IEEE Consumer Communications and Networking Conference, Las Vegas, Nevada, USA. <http://www.ieee-ccnc.org/2007/>

& Jan 15<sup>th</sup> : Special Issue Journal on Autonomic Systems' Concepts in Advanced Grid Systems to be published in Multi-Agent and Grid Systems - An International Journal  
<http://www.infi.ulst.ac.uk/~autonomic/mags/>

## March 2007

Mar 6-8, (cfp tba) 3<sup>rd</sup> IEEE Systems and Software Week, Baltimore - Maryland, USA, <http://www.systemsandsoftwareweek.org>

Mar 11-15; (cfp 8 Sept) SAC 07: 2007 ACM Symposium on Applied Computing - Special Track on Autonomic Computing, Seoul, South Korea  
<http://www.it.iitb.ac.in/~umesh/cfp-ac2007.pdf>

Mar 21-23, (cfp 15 Aug), ISADS 2007 - The 8th International Symposium on Autonomous Decentralized Systems, Sedona, Arizona, USA;  
<http://asusr1.eas.asu.edu/srlab/activities/isads/>

## May 2007

May 21-25, (cfp) IM 2007: 10th IFIP/IEEE International Symposium on Integrated Network Management, Munich, Germany.  
<http://www.im2007.org>

## Join IEEE TF AAS

If you have not already done so, you are invited to join the IEEE Computer Society Autonomous and Autonomic Systems Task Force online.

Details can be found at the web site

<http://www.computer.org/tab/>

Where you can sign-up to TF-AAS and three others free

<http://www.computer.org/TCsignup/index.htm>

If you have already signed up, manage your Technical Activity through TECA:

<http://www.computer.org/services/teca>