Recovery-Oriented Approaches to Dependability — March/April 2005

Dependability is increasingly important for computer systems. Past efforts have focused on reducing the frequency of failures, particularly due to hardware faults. Recovery-oriented computing aims to increase dependability by reducing repair or recovery time for all reasons, including faults caused by hardware, software, or operator.

*IC* seeks contributions for a special issue on recovery-oriented approaches to dependability. We would prefer case studies about real production systems — innovative recovery approaches and highlights of real results — rather than single-project or vision-only papers. Strong contributions might include data sets related to outages or outage management and recovery, interesting operational techniques, methods for predicting or handling unusual workload fluctuations, and so on.

Because configuration-related failures account for a significant percentage of outages, we are also very interested in approaches to preventing, detecting, diagnosing, and repairing configuration-related problems in real systems or mature prototypes.

Submissions that focus on recovery and dependability are more appropriate than those focused on improving performance. Example topics of interest include, but are not limited to

- real-life case studies of outage and recovery behavior in production systems,
- statistical-analysis approaches to problem detection, diagnosis, and resolution, especially for configuration-related problems,
- the role of human operators (and tools to help them),
- planning for and recovering from large-scale distributed disasters,
- informed critiques of the limits of recovery-oriented approaches to dependability, and
- understanding the limits of "self-*" systems.

Submissions due 1 August 2004

Guest editors: Armando Fox (Stanford University) and David Patterson (University of California, Berkeley)

Information Discovery: Needles and Haystacks — May/June 2005

Search has become a foundational component of the Web. Driven by the vast expansion of information available in electronic form, the tools for computer-based information discovery have advanced dramatically over the past five decades. The Web’s emergence as an information, cultural, and economic phenomenon has accelerated this advancement.

The Web presents new challenges for search, including massive scale, global distribution, diversity in all dimensions, multimedia, trust and authority. As organizations and individuals increasingly move toward managing most of their information electronically, search is also becoming critical for applications such as intra-nets and personal email. The Web has provoked remarkable improvements over traditional information-retrieval technologies with new techniques such as link analysis. Despite these advances, current search technology leaves a lot to be desired, and we will continue to see this vibrant research field evolve in the coming years.

For this issue of *IEEE Internet Computing*, we invite researchers and developers to submit articles of both a retrospective and prospective nature about information discovery. Appropriate topics include:

- overviews of existing information-retrieval techniques, describing both new issues and traditional challenges,
- reviews of the current state-of-the-art, especially focusing on the integration of link analysis with text-based analysis,
- analysis of the role of human- and machine-generated metadata in Web information discovery, and
- new challenges in large-scale information discovery in the next decade including personalization, non-text corpora, corporate intranets, domain specificity, the "deep Web," and the integration of personal information spaces with Web information.

Submissions due 1 October 2004

Guest editors: Amit Singhal (Google) and Carl Lagoze (Cornell University)