



57th IFIP WG 10.4 Meeting

Ishigaki, Japan

January 21-25, 2010

**Business
Meeting**

Saturday, January 23, 2010

Agenda

- IEEE/IFIP DSNs - DSN-2010, DSN-2011 ...
- Future WG Meetings —58, 59 ...
- Upcoming events in dependable computing
- Membership (members only)

IEEE/IFIP International Conference on Dependable Systems and Networks



Chicago, Illinois, USA (2010)

- ◆ General Chair: **Farnam Jahanian** (Univ of Michigan)
- ◆ Conference Coordinator: **David Taylor** (Univ of Waterloo, Canada)
- ◆ DCCS Program Chair: **Christof Fetzer** (TU-Dresden, Germany)
- ◆ PDS Program Chair: **Mohamed Kaaniche** (LAAS-CNRS, France)



Hong Kong, China (2011)

- ◆ General Chair: **Michael Lyu** (Chinese University of Hong Kong, China)
- ◆ Conference Coordinator: **Sy-Yen Kuo** (National Taiwan University, Taiwan)
- ◆ DCCS Program Chair: **Saurabh Bagchi** (Purdue University, USA)
- ◆ PDS Program Chair: **Susanna Donatelli** (University of Torino, Italy)



DSN 2010
June 28 – July 1

Make no little plans.™

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Highlights

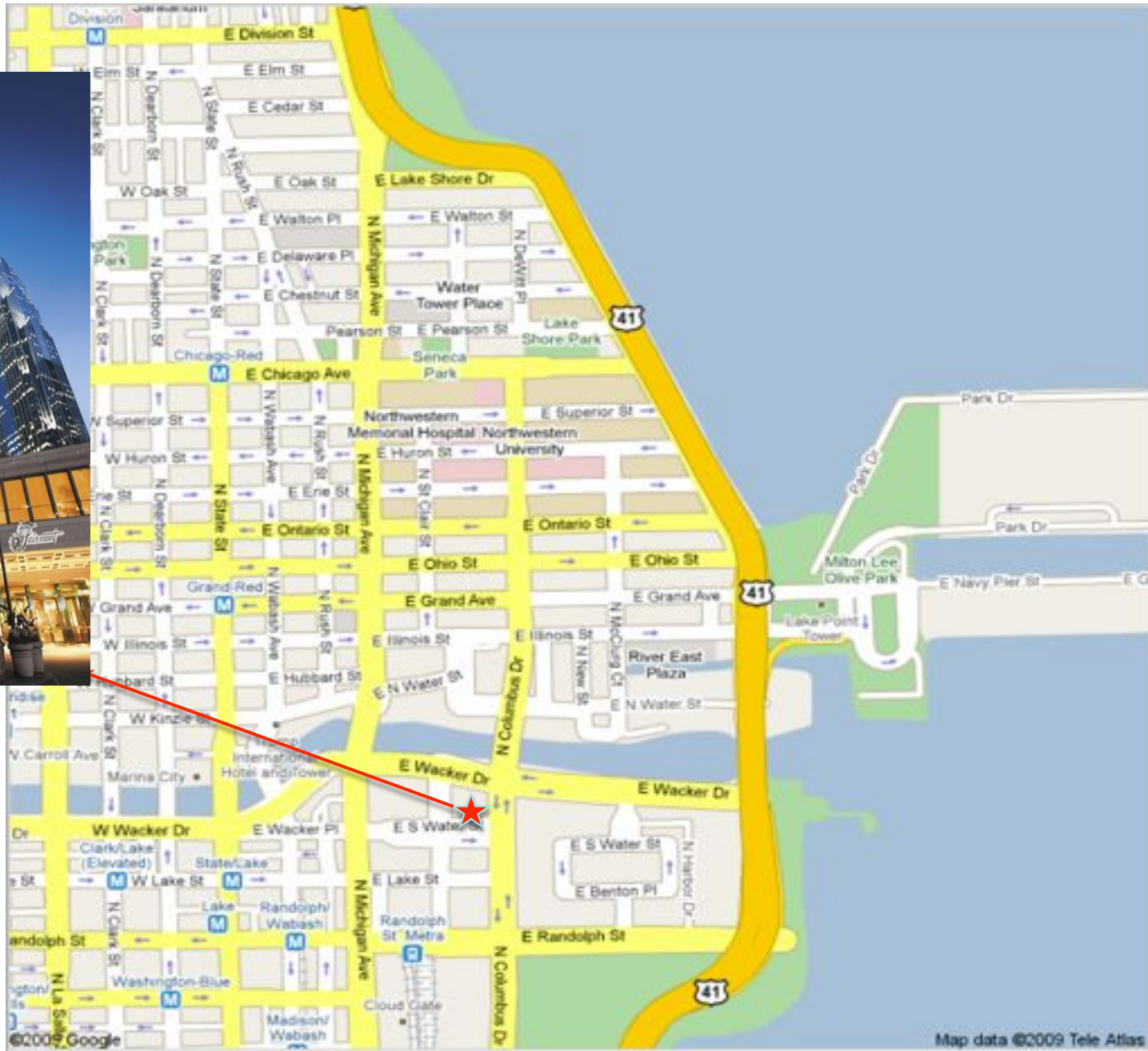
- **Date: June 28 – July 1, 2010**
- **Hotel: FAIRMONT CHICAGO MILLENNIUM PARK**
- **Format: workshop/tutorial on Monday followed by PDS/DCCS tracks on Tues, Wed and Thurs**
- **Welcome reception on Monday evening**
- **Conference banquet on Wednesday evening**
- **Nancy Lynch to receive 2010 IEEE Piore Award**

FAIRMONT CHICAGO MILLENNIUM PARK



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Chicago's Top Attractions

- ❑ Navy Pier
- ❑ Millennium Park
- ❑ Field Museum of Natural History
- ❑ Shedd Aquarium
- ❑ Adler Planetarium
- ❑ Museum of Contemporary Art
- ❑ Chicago Art Institute
- ❑ Chicago Children's Museum
- ❑ Museum of Science & Industry
- ❑ Lincoln Park Zoo
- ❑ Sears Tower Skydeck
- ❑ John Hancock Observatory
- ❑ Buckingham Fountain (seasonal)



Travel Resources

- ❑ Airports (3,400 flights a day, 62 international)
- ❑ Direct flights to hundreds of cities in the Americas, numerous European and Asian cities
- ❑ Chicago transit includes: elevated and subway train lines; free trolleys; pedestrian walkway system of tunnels and bridges
- ❑ CTA (2,000 buses and 144 “L” stations)
- ❑ Metra (12 commuter rails from 6 county areas)
- ❑ Taxis (2nd largest fleet in the nation)
- ❑ Dedicated Busway (8 min. downtown hotels)

Update since last IFIP meeting ...

- Four workshops selected:
 - Workshop on Recent Advances in Intrusion-Tolerant Systems (WRAITS)
 - Workshop on Dependable and Secure Nanocomputing (WDSN)
 - Workshop on Proactive Failure Avoidance, Recovery and Maintenance (PFARM)
 - Workshop on Fault-Tolerance for HPC at Extreme Scale

- Call for tutorial proposals pending
- Call for student forum and fast abstract will be posted by Feb. 1



Update since last IFIP meeting ...

- Conference Sponsorship:
 - IEEE TC and IFIP expected to fund 10-20 student travel grants
 - Student will have unrestricted access to conference tracks and all social events → we lose money on every student registration
 - Sponsorship commitments from HP, Yahoo and Arbor Networks
 - Several others pending ... BUT to reduce student registration
 - WE NEED HELP FROM THE DSN COMMUNITY
 - Contact Farnam (General Chair) or one of the fund raising chairs if you have suggestions or are able to help



Update since last IFIP meeting ...

- Conference registration Info:
 - Registration fees (approval pending by IEEE):
 - Advance Member: \$700
 - Late/On-site Member: \$840
 - Advance Student Member: \$485
 - Late Student Member: 610
 - Non-member is about 20% more
 - On-line registration and credit card processing handled by another firm (NOT IEEE)
 - On-line hotel and conference registration sites will be up by early March



Update since last IFIP meeting ...

- Chuck and Farnam have carefully considered several attractive banquet venues:
 - The Art Institute of Chicago
 - Shedd Aquarium
 - The Field Museum
 - Museum of Science and Industry
 - Odyssey at Navy Pier

- Currently negotiating contract with ...





THE ART INSTITUTE OF CHICAGO

**DSN 2010 Reception
June 30, 2010**

DSN 2010 Reception
June 30, 2010
Chicago, IL

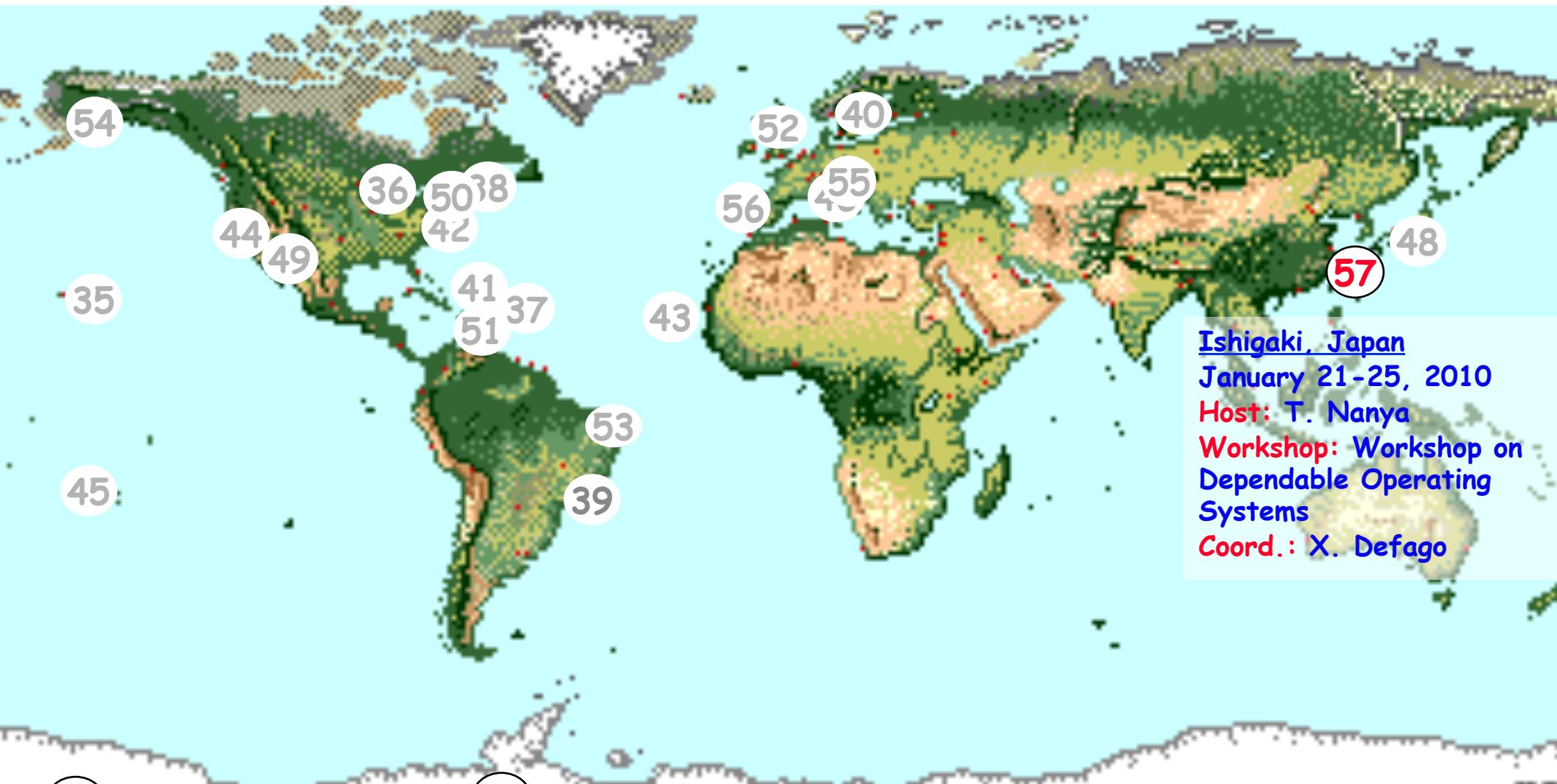
JOIN US AT DSN 2010



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Future Working Group Meetings



Ishigaki, Japan
January 21-25, 2010
Host: T. Nanya
Workshop: Workshop on Dependable Operating Systems
Coord.: X. Defago

58 Chicago (summer 10)

60 HK/Taiwan (summer 11)

59 ??? (winter 11)

61 ??? (winter 12)

58th Meeting (summer 2010)

- Location: Chicago
- Workshop: Failure Analysis and Diagnosis in Large Distributed Systems

A scenic view of the Chicago skyline across Lake Michigan. The water is a vibrant turquoise color, and a white sailboat is visible on the right side. The sky is a deep blue with some light clouds. The text is overlaid on the upper portion of the image.

58th Meeting of IFIP WG10.4

June 24 to June 27, 2010

Sofitel Hotel

Chicago, Illinois

Organizers

Local: Chuck Weinstock & Faram Jahanian

Program: Priya Narasimhan, Dan Sieworiek, Neeraj Suri

At-A-Glance

- Hotel: Sofitel Hotel Chicago
- Dates: June 24 to 27, 2010
- Social Events: Reception, evening of June 24th. Banquet on the 25th or the 26th (leaning towards the 25th).
- Excursion: none, but afternoon (and evening if no banquet that day) for individual sightseeing, etc. on the 26th.
- Room Rate: \$200/night single or double. Extra charge for third person.
- Registration Fee: expected to be under \$600.
- More details to follow.

Location

- \$40 taxi from OHare, Shuttle for about \$20, Subway for \$2.25. Taxi to DSN hotel about \$7
- Just off of Chicago's Magnificent Mile
- Four minute walk to the Hancock Tower and the Water Tower
- 10 minute walk to Oak Street Beach
- About a mile to Navy Pier
- Under two miles to Lincoln Park Zoo or the DSN hotel
- Lots of top restaurants, night clubs, etc. within a short walk

Sofitel Chicago Water Tower



- Sofitel Chicago Water Tower bids you welcome with world-class downtown Chicago hotel accommodations - minutes from the Magnificent Mile, Michigan Avenue, the Museum of Contemporary Art, the Art Institute, and trendy boutiques.
- Designed by the French architect Jean-Paul Viguier, our downtown Chicago Illinois hotel is a 32-floor prism of glass, boasting 415 rooms, including 33 luxurious suites.
- Embrace modern design and rich architectural legacy at this luxury hotel in downtown Chicago, Illinois.

SPECIAL FEATURES

- CdA - Café des Architectes - lends international flavor to this downtown Chicago Illinois hotel, as a modern French brasserie. Engage in lively people-watching inside our downtown Chicago hotel at Le Bar, where the crowd mingles well into the night.



Sofitel

Services at Hotel

- ❑ WiFi wireless Internet access
- ❑ Concierge
- ❑ Dry cleaning / Ironing Porter
- ❑ Safe deposit box at reception
- ❑ Pet allowed
- ❑ Parking
- ❑ Private indoor parking
- ❑ Public outdoor parking
- ❑ Valet parking
- ❑ Facilities for disabled
- ❑ Comply w/ Americ. Disability Act
- ❑ Reduced mobility facilities

Meeting Services

- ❑ WiFi wireless Internet access
- ❑ Business cntr with support staff
- ❑ Copy/print service available
- ❑ Fax machine
- ❑ Internet connectivity
- ❑ Self service business centre

Sofitel

MEETINGS AND EVENTS

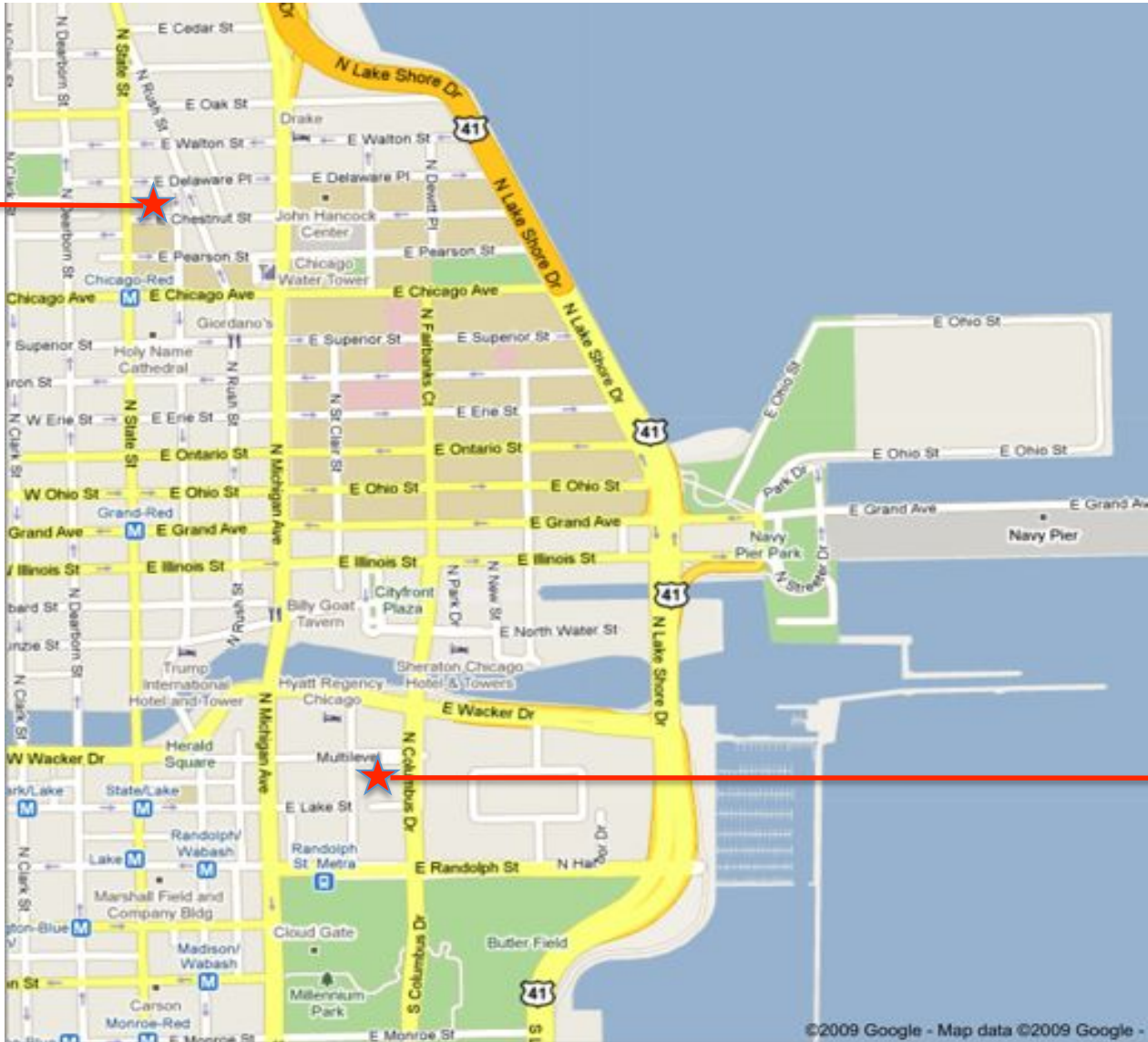
- With more than 10,000 square feet of downtown Chicago meeting space, Sofitel Chicago Water Tower provides a spectacular event venue, showcasing an extensive range of amenities for corporate groups. Our staff is passionately dedicated to the success of your next Chicago conference, banquet, or event. Select from a 4,500-square-foot ballroom and eight Chicago meeting rooms, with floor-to-ceiling windows and magnificent views of downtown.



Location of IFIP and DSN Hotels



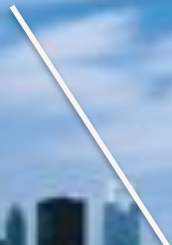
IFIP



DSN



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IFIP



IFIP WG 10.4 Workshop on Data (esp. Failure) Analysis & Diagnosis June 2010

Priya Narasimhan, Neeraj Suri, Dan Siewiorek

Coverage: State of the Art/Practice & Challenges

Cloud Computing

Telecommunication Systems

Data Centers

Embedded Systems

Data Mining

Real Data sets

...

Initial Speaker List

- *Initial industry candidates*

- ✓ Thomas E. Fuhrman & Mutasim Salman, General Motors
- ✓ Milind Bhandarkar, Yahoo!
- ✓ Werner Vogels, Amazon
- ✓ Matti Hiltunen, AT&T
- ✓ John Wilkes, Google
- ✓ Dhruba Borthakur, Facebook
- ✓ Jeff Hammerbacher, Cloudera
- Flavio Bonomi, Cisco
- Moises Goldszmidt, Microsoft
- Brendan Murphy, MSR

- *Initial Academic researchers*

Armando Fox, UC Berkeley

YY Zhou, UC San Diego

Miroslaw Malek, Humboldt U

- *Potential IFIP panelists*

Hermann Kopetz

Jacob Abraham

Ravi Iyer

Bill Sanders

Aad van Moorsel

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59th Meeting (winter 2011)

- Location: ??
- Workshop: *Possibly* dependable cloud computing

Dependability and Cloud Computing



Robert Stroud
Centre for Software Reliability
City University, London

18th January 2010



Proposal

- Organise a 10.4 workshop on the theme of dependability and the cloud
- Bring together leading researchers from Europe and the US (and Asia?) to discuss the unique dependability challenges posed by the cloud:
 - EC FP7 Objective-ICT-2009-1.4 Trustworthy ICT
 - DARPA/NSF equivalent? Other cloud initiatives?
- Invite cloud service providers and other industry representatives as appropriate



Background

Cloud computing is a new model for delivering services over the Internet

The cloud is essentially a virtual computing resource that scales on demand and offers attractive cost benefits

However, users are understandably reluctant to trust their applications and data to the cloud without adequate dependability guarantees

So how do we build a trustworthy cloud, and how do we know whether a cloud can be trusted?



Cloud-specific challenges

The tension between

- the desire of the cloud provider to maintain some opacity about how the cloud service is provided for operational and commercial reasons,

VS.

- the need for the cloud user to have some visibility of the internal structure of the cloud in order to have appropriate assurances that legal, security, and dependability requirements have been met



Cloud-specific challenges

The elasticity of the cloud, which enables certain kinds of failure to be dealt with transparently, and therefore has the potential to facilitate a new class of cloud-specific fault tolerance strategies



Cloud-specific challenges

- Commodity aspects of the cloud – cloud users can be charged according to the level of dependability they require, and can reason about cost-benefit trade-offs



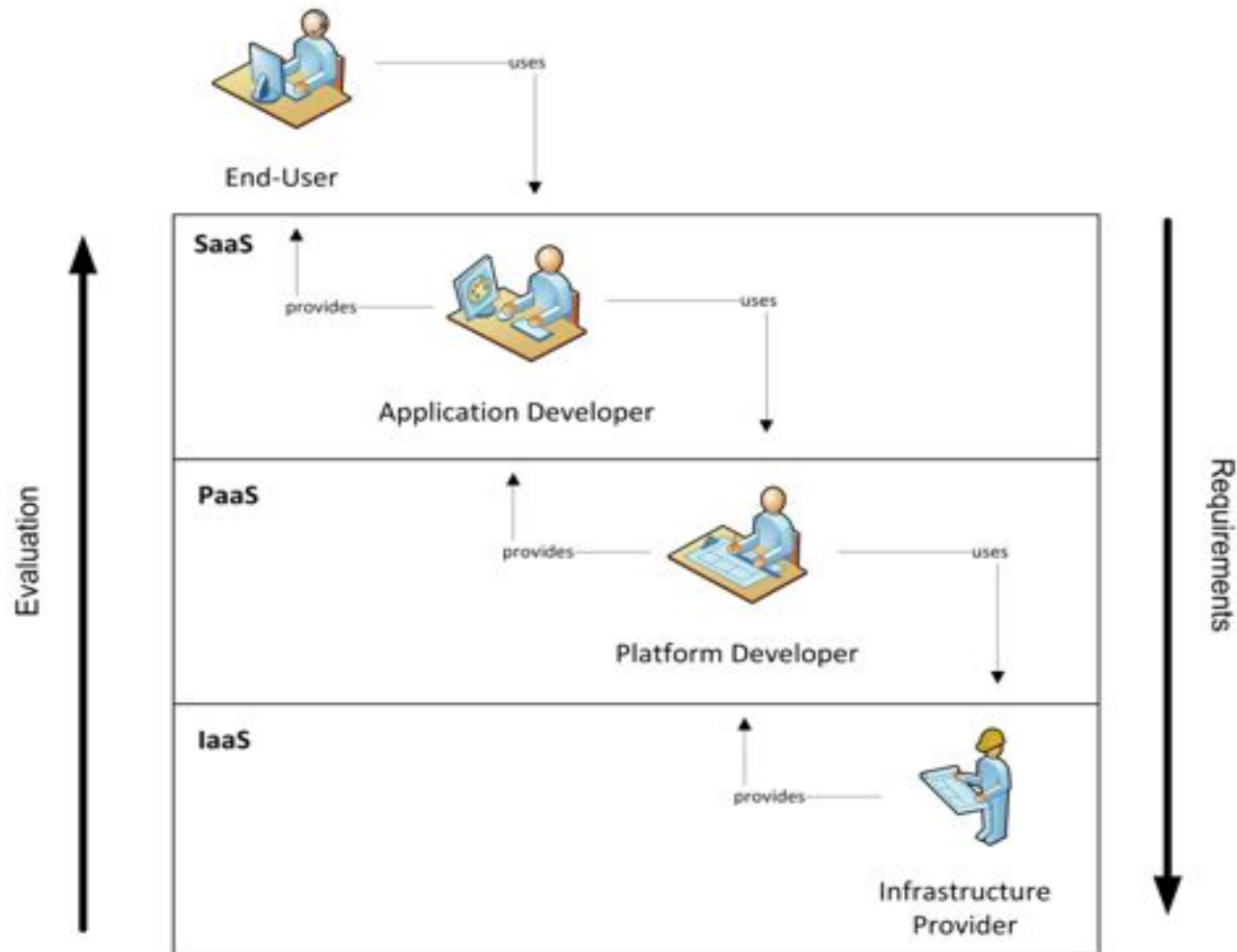
Cloud-specific challenges

■ The cloud is inherently recursive:

- A cloud user consumes a cloud service
- A cloud provider delivers a cloud service
- A cloud developer builds a cloud service on top of a cloud service

■ A cloud developer is both a cloud user and a cloud provider

Layers of cloud abstraction





Some research questions

What are the threats and vulnerabilities that could compromise a cloud service, and what countermeasures are available to guard against these compromises?

What kinds of cloud services and abstractions does a cloud developer need in order to construct trustworthy cloud applications for end-users?

What kinds of models and policies are appropriate for specifying and reasoning about cloud service level guarantees at a commodity level?

What is required in the way of evidence and argumentation to persuade the end-user that a cloud service is trustworthy and can meet the end user's requirements with an appropriate degree of assurance?

Upcoming Events

- **8th European Dependable Computing Conference, Valencia, Spain, April 28-30, 2010 [<http://edcc.dependability.org>]**
- **16th IEEE Pacific Rim International Symposium on Dependable Computing (PRDC 10), Tokyo, Japan, Dec 13-15, 2010.**