



56th IFIP WG 10.4 Meeting

Obidos, Portugal
July 2-5, 2009

**Business
Meeting**

Friday, July 3, 2009

Agenda

- IEEE/IFIP DSNs - DSN-2009, DSN-2010 ...
- Future WG Meetings —57, 58, 59 ...
- SIG Reports
- Upcoming events in dependable computing
- Membership (members only)

IEEE/IFIP International Conference on Dependable Systems and Networks

Lisboa, Portugal (2009)



- ◆ General Chair: **Paulo Verissimo** (Univ of Lisboa, Portugal)
- ◆ Conference Coordinator: **Andrea Bondavalli** (Univ of Firenze, Italy)
- ◆ DCCS Program Chair: **Matti Hiltunen** (AT&T Labs-Research, USA)
- ◆ PDS Program Chair: **Felicita di Giandomenico** (ISTI-CNR, Italy)
- ◆ Attendance: 270 (~200 around for new first day)

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

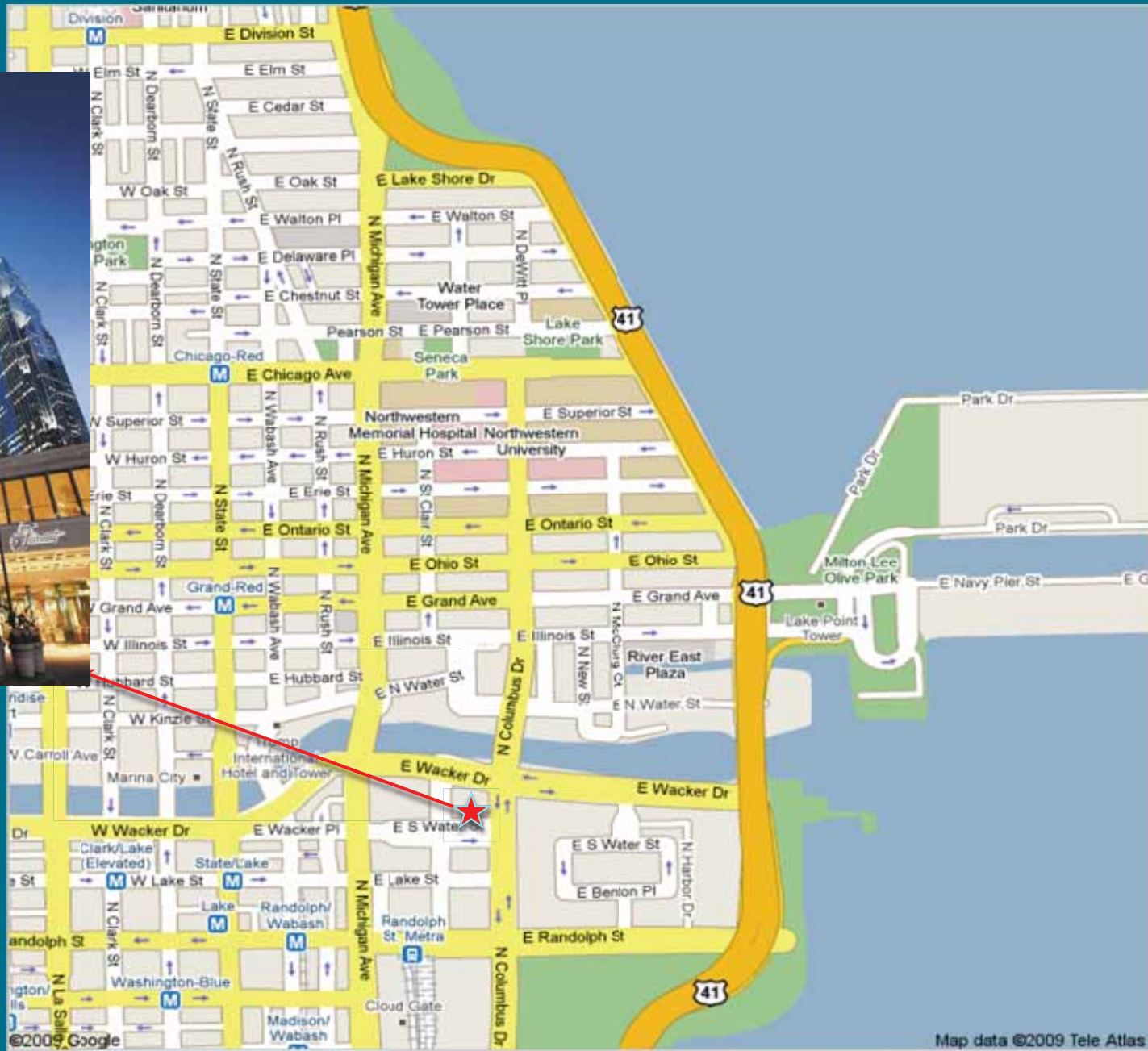
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Highlights

- 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
- Organizing Committee: Up and running
- Web site and preliminary call for contributions



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Fairmont Chicago

- Rising gracefully above Grant and Millennium Parks and Chicago's impressive lakefront, The Fairmont Chicago is located conveniently near many cultural attractions, the city's business and financial district and the world renowned shopping along the Magnificent Mile. The Fairmont Chicago offers its guests an ideal address for both business and pleasure.
- *The Fairmont Chicago has been recognized for exceptional service and amenities on the 2003 Conde Nast Traveler's Gold List and Travel & Leisure Magazine's Top 500 Hotels List and Travel & Leisure Magazine's Top 500 Hotels List.*



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)



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Future Working Group Meetings



Obidos, Portugal
July 2-5, 2009
Host: Henrique Madeira
Workshop: Workshop on Experimental Methods
Coord.: R. Maxion

- 57 Japan (winter 10)
- 58 Chicago (summer 10)
- 59 ??? (winter 11)
- 60 HK/Taiwan (summer 11)
- 61 ??? (winter 12)

57th Meeting (winter 2010)

- Location: Ishigaki, Japan
- Workshop: Dependable Operating Systems

IFIP WG10.4 Winter Meeting

Ishigaki Island, Japan

Jan.21 – 25, 2010

Where?



Club Med Kabira, Ishigaki Island, Japan

40min. by Bus from Ishigaki Airport

Average Temperature in January : 18°C



Premium “All Inclusive” System

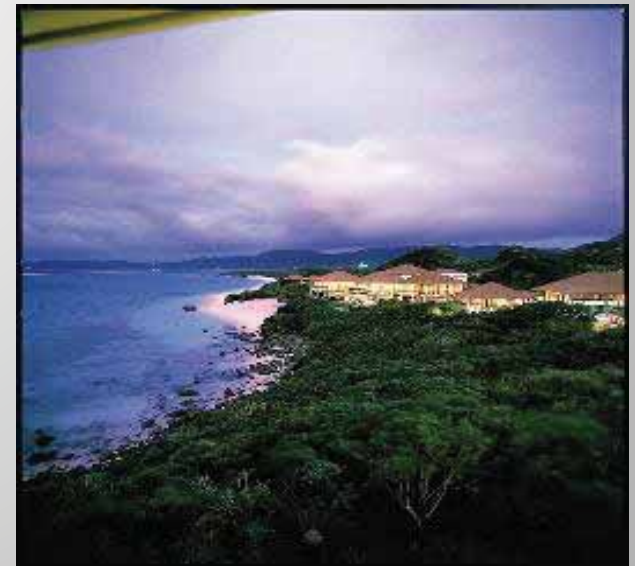
–All meals and various drink including Wine, Beer, Japanese “AWAMORI” at Restaurant

–Snacks and various Drink including Alcohol at Bar

–Various Sports Facilities and Program with Lesson

–Activities and Programs as Free of charge

- Tennis ●Archery ●Aerobics ●Squash ●Mountain Bike with Lesson ●Frying Trapeze
- Ping pong ●Windsurfing ●Snorkeling ●Boat trip for Snorkeling ●Water Aerobics
- Sea Kayaking ●Stretching ●Main Dining ●Bar ●Theatre ●Swimming Pool
- Conference Room ●Weight Training Room ●Mini Club ●Junior Club





COST (per one person per day)

- Accommodation + 3 meals + Bar + Service Charge

Single occupancy: 29000 Yen = 215 Euro

Double occupancy: 16500 Yen = 122 Euro

Registration Fee < 10000 Yen = 74 Euro

Note:

A part of the hotel cost will be included in Registration Fee

Total cost for 4 days: 934 Euro

For your reference

Ishigaki

Total cost for 4 days: 934 Euro

Obidos

Accommodation/per day: 100 Euro

Registration Fee: 350 Euro

Total cost for 4 days: 750 Euro

Alaska

SGL/DBL Accommodation/per day US\$ 229 US\$

Registration Fee : 600 US\$

Total cost for 4 days: 1516 US\$

Edinburgh

Accommodation + Breakfast 120GBP

Registration Fee : 350 GBP

Total cost for 4 days : 830 GBP

Meeting Schedule

- Thursday, January 21, 2010: Eve Reception
- Friday, January 22, 2010: Workshop day one
- Saturday, January 23, 2010: Workshop day two
- Sunday, January 24, 2010: Free day with social dinner in the evening
- Monday, January 25, 2010: Research Reports (until noon)

Workshop on Dependable Operating Systems

Organizer: Xavier Defago (JAIST, Japan)

Guest Speakers

- Roy Campbell (Univ. Illinois at U.C., USA)
- Kane Kim (U.C. Irvine, USA)
- Shlomi Dolev (Ben Gurion University of the Negev, Israel)
- Herbert Bos (Vrije Universiteit, Amsterdam)
- Georges Candea (EPFL, Switzerland)
- Emin Gun Sirer (Cornell Univ., USA)
- Gilles Muller (INRIA / Ecoles des Mines Nantes, France)
- Mario Tokoro (Sony Corporation /Keio Univ., Japan)
- Yutaka Ishikawa (Univ. of Tokyo, Japan)
- *Some more from JST project teams on Dependable OS*



















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58th Meeting (summer 2010)

- Location: Chicago area
- Workshop: 2 proposals



IFIP 10.4 Working Group Meeting DSN 2010

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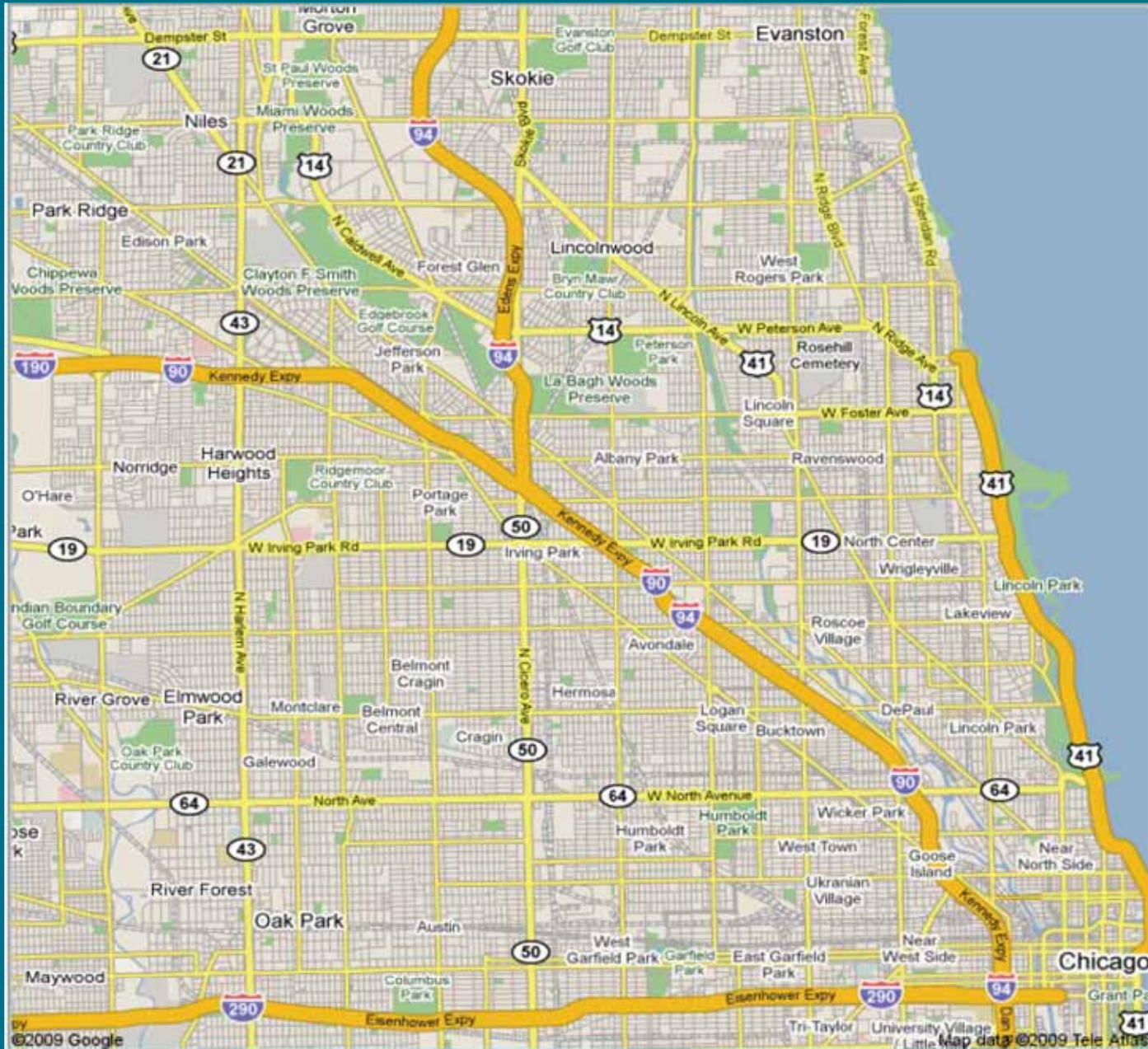
Two Dates, Three Locations

□ Possible Dates

- June 24 to June 26 (Before DSN)
- July 1 to July 5 (After DSN)

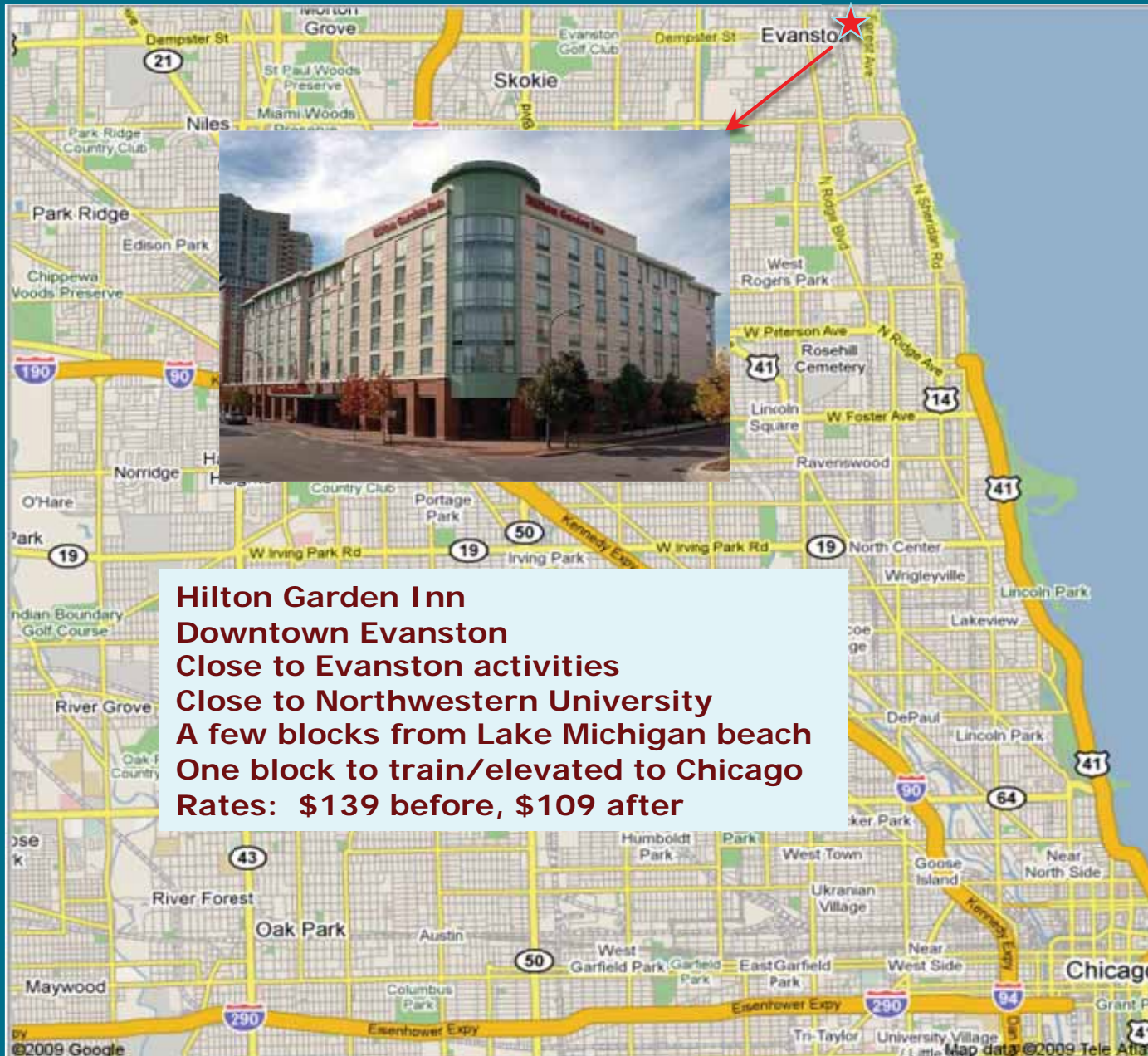
□ Possible Venues

- Sofitel (about 2 miles from DSN venue)
- Swissotel (about a block from DSN venue)
- Hilton Garden Inn (in Evanston, about 14 miles from DSN venue)

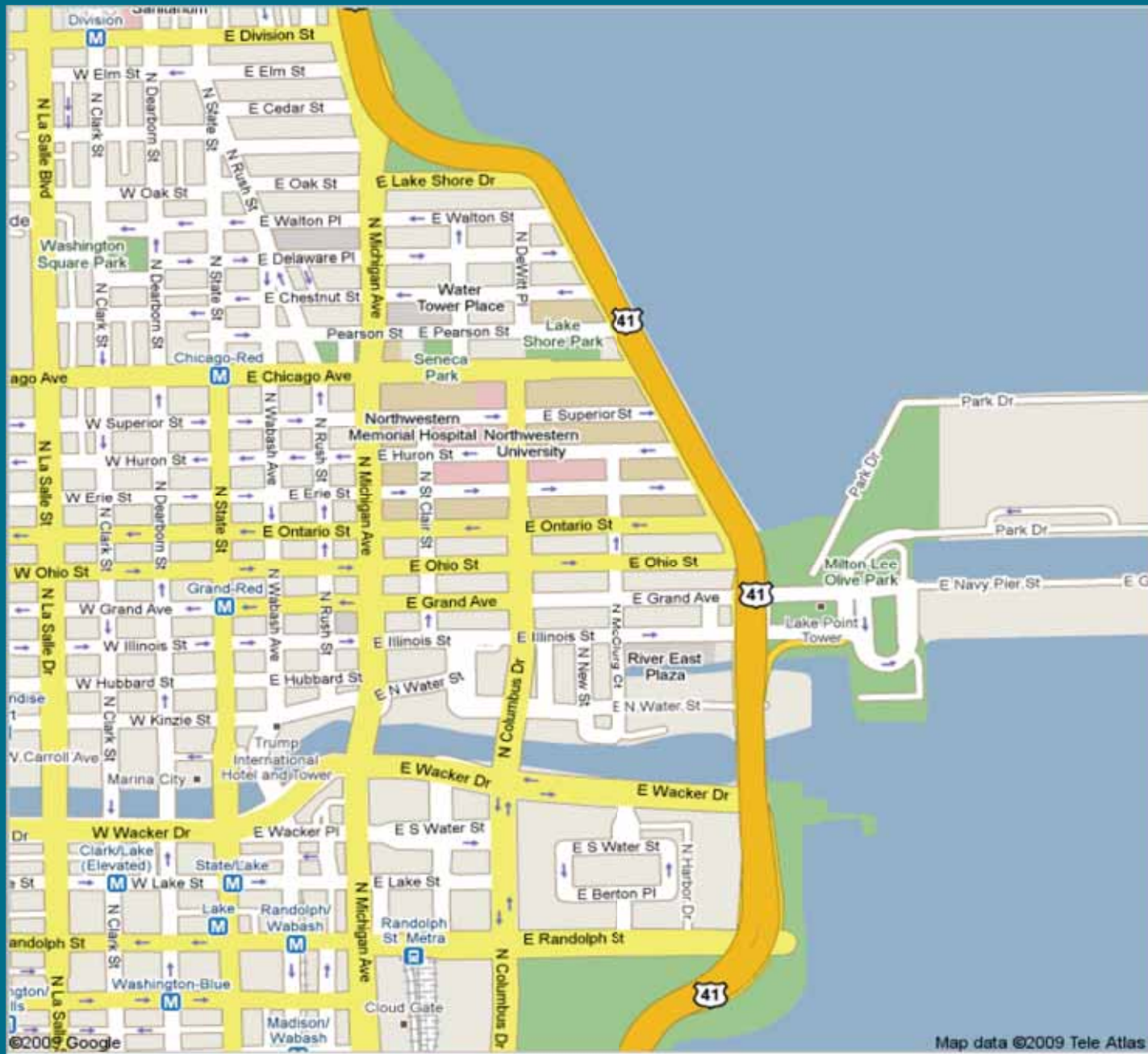


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**Hilton Garden Inn
Downtown Evanston
Close to Evanston activities
Close to Northwestern University
A few blocks from Lake Michigan beach
One block to train/elevated to Chicago
Rates: \$139 before, \$109 after**

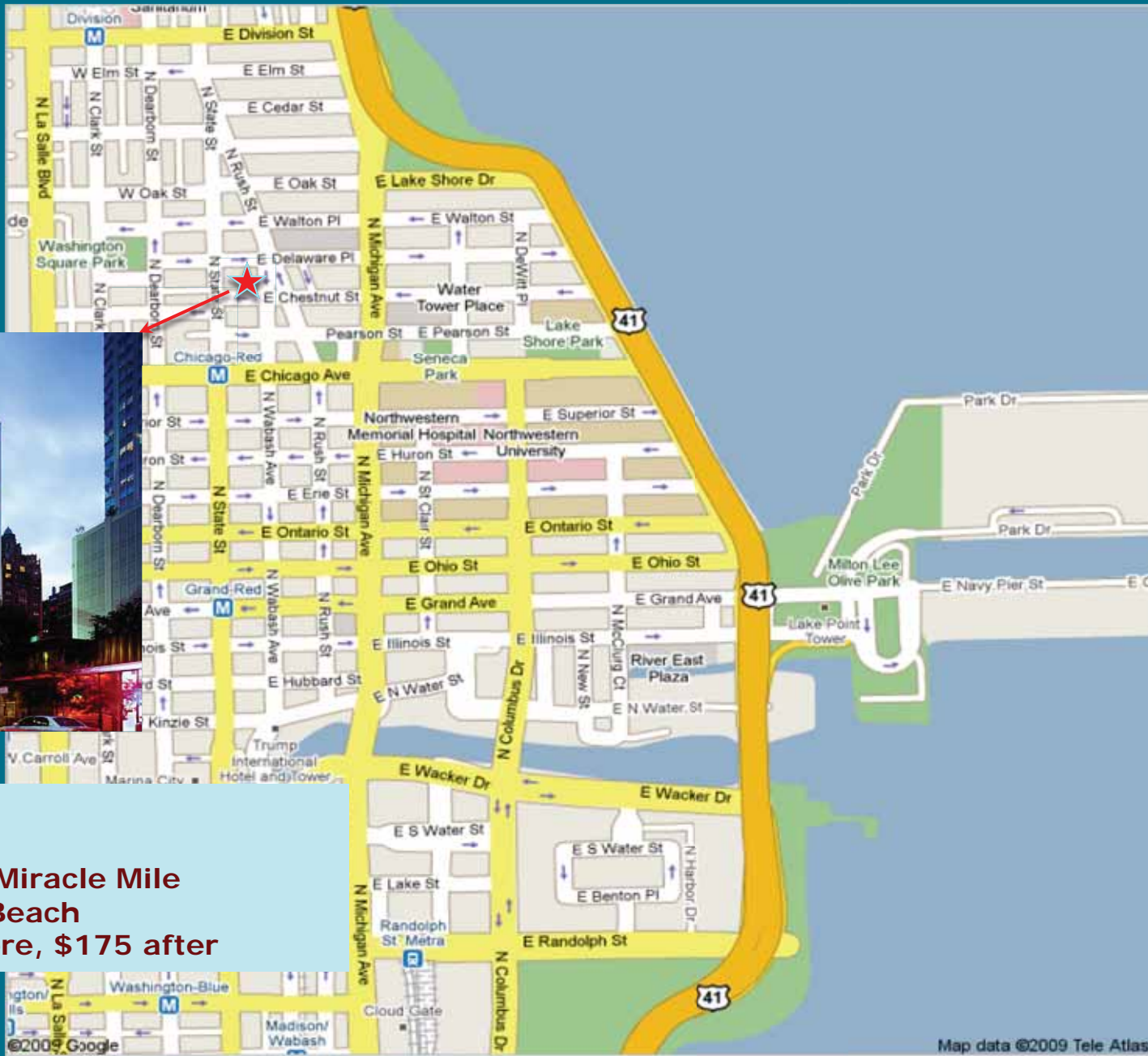


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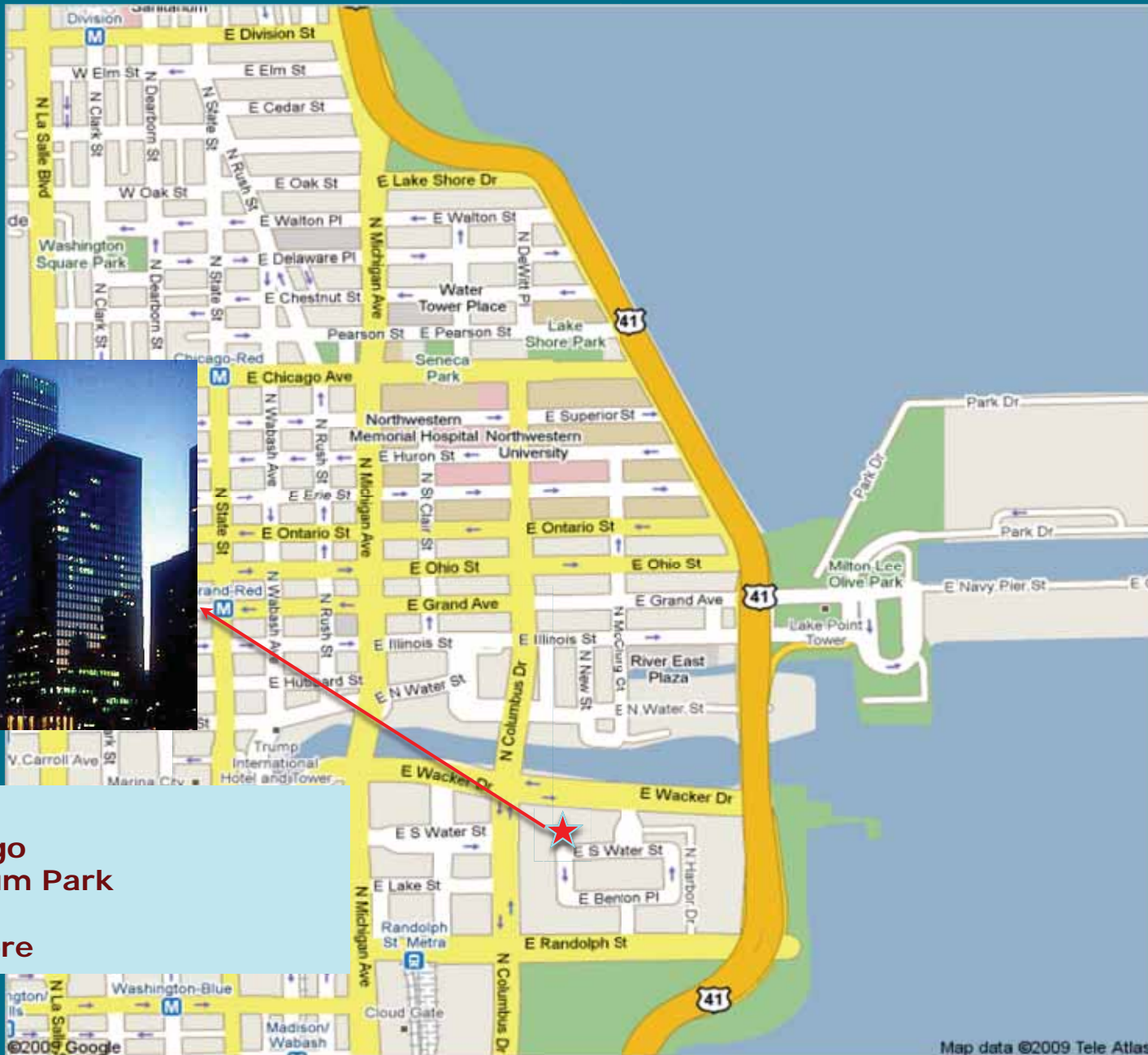


Sofitel Hotel
Near North Side
Two blocks from Miracle Mile
Near Oak Street Beach
Rates: \$245 before, \$175 after



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Swissôtel
Downtown Chicago
Close to Millennium Park
Near Navy Pier
Rates: \$179 before

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IFIP 10.4 Summer 2010 Meeting Locations

<u>Location</u>	<u>Dates</u>	<u>Hotel Room Rate</u>
Hilton Garden Inn	6/24-6/27	\$139.00
Evanston, IL (about 12 miles North of DSN)	7/1-7/5	\$109.00
Sofitel	6/24-6/27	\$245.00
Off North Michigan Ave (Miracle Mile)	7/1-7/5	\$175.00
About a mile from the DSN hotel		
Swissotel	6/24-6/27	\$179.00
A block from the DSN hotel	7/1-7/5	Needed space not available
<i>Room rates have not been negotiated</i>		<i>M. Elkins 6.23.09</i>



SOFITEL CHICAGO WATER TOWER

20 East Chesnut Street

Downtown Chicago,

Illinois 60611

choose **CHICAGO**

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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.





Swissôtel Chicago
323 East Wacker Drive
Chicago, Illinois 60601

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Swissôtel Chicago



LOCATION

Where the River meets the Lake - Swissôtel Chicago is an all-glass triangular hotel, situated in the confluence of the Chicago River and Lake Michigan. The hotel has fabulous wrap-around views from Navy Pier to Millennium Park and is close to many Chicago attractions, including Navy Pier and The Magnificent Mile. Swissôtel Chicago offers 661 tastefully decorated and generously oversized rooms and suites, designed by noted Chicago architect, Harry Weese. Each one of the hotel guest rooms features many amenities to make your stay comfortable, including a large desk, multi-line phones with voicemail, and remote message retrieval. Swissôtel Chicago offers a variety of cultural and shopping weekend packages and provides a smoke-free environment.

ACCOMMODATIONS

Guest Rooms

- Beginning April 2008, each of our newly renovated rooms will feature a specialty Swiss Comfort Bed
- 37" high-definition split-screen plasma television and a frameless glass shower stall.

To further accommodate the hotel's large number of business travelers, the rooms will include the following upgrades and amenities:

- Oversized executive desks with spacious workspaces
- Mini-bars
- State-of-the-art, contemporary ergonomic chairs
- Technology docking centers to use a variety of media devices simultaneously
- DS3 Internet technology—equivalent to 28 T1 lines
- Virtual local area network capabilities for meetings



Swissôtel Chicago

SWISS EXECUTIVE CLUB LOUNGE

- Take advantage of the Lounge's personal concierge service
- Express check-in and check-out privileges
- Keyed access and study and meeting room area with complimentary Internet usage.

Additional features include:

- A library
- Flat-panel TV
- International newspapers and magazines
- Plus morning continental breakfast and evening hors d'oeuvres.

42ND FLOOR HEALTH CLUB AND POOL

Overlooking panoramic views of Lake Michigan, the Penthouse Health Club and Pool helps you stay in tiptop shape while you are away from your home gym. Pump up your energy level with a circuit on our comprehensive array of aerobic machines, strength equipment, free weights, Lifecycles, recombinant bicycles, treadmills and Life Fitness equipment. Then cool off with a dip in our sparkling 45-foot indoor pool, or ease your tired, tense muscles in the dry sauna or Jacuzzi. Massage services are also available.

RESTAURANTS & LOUNGE

Geneva Restaurant

Indulge in a full American breakfast with European flair. In the afternoon and evening hours, the restaurant transforms into banquet or meeting space for up to 140 people.

Lobby Lounge

Stop into the center of action at our Lobby Lounge. View the sunrise over a spread of European pastries, and energize your day with freshly brewed coffee. Later, watch the bustle of our urban hotel from a plush seat near the fireplace as you sip a glass of Chardonnay.

The Palm

During your visit, experience a dining tradition that's been going strong for three generations at this acclaimed restaurant. For lunch or dinner, choose from a savory selection of tender aged prime beef, traditional Italian fare and outrageously sized lobsters.



Swissôtel Chicago

CONFERENCES AND MEETINGS

With 27,000 square feet of flexible meeting and function space, Swissôtel Chicago is amply prepared for your business agenda. Choose from two handsomely furnished executive boardrooms, a 60-seat tiered theater and 18 private suites that can accommodate 12-30 participants. All conference rooms feature audio/video conferencing and iBAHN NextConnect SM high-speed wired and wireless Internet access. The 6,106-square-foot Grand Ballroom and the 2,400-square-foot Alpine Ballroom are considered two of the city's most technically sophisticated ballroom venues. Expansion Plan

In June 2009, Swissôtel Chicago will unveil their expansion comprised of 30,000 square feet of meeting space, including a state-of-the-art 15,000-square-foot ballroom. The combination of new and current space will position Swissôtel Chicago as an ideal meeting venue, whether for an executive gathering of 15 or a convention of 1,500.

SWISSOFFICE BUSINESS CENTER

Swissôtel Chicago's Business Center offers an impressive array of state-of-the-art equipment and services, including standard photocopying, transparency, GBC binding, secretarial typing, page composition service, telefaxing, teleconferencing and high-speed wireless Internet access.





Hilton Garden Inn
1818 Maple Avenue
Evanston, Illinois 60201

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Hilton Garden Inn



LOCATION

In the heart of downtown Evanston on Chicago's North Shore just blocks from dining - shopping - entertainment - and recreation on Lake Michigan. Adjacent to Northwestern University with easy access to all facilities. 12 miles north of Chicago.

In Illinois, the Hilton Garden Inn Evanston hotel is certain to please the busy executive or leisure traveler with our amenities that include complimentary wireless internet access with secure PrinterOn® remote printing. The Hilton Garden Inn Evanston hotel has an in-room hospitality center with a microwave, refrigerator, and coffeemaker, two dual-line phones with voicemail and data ports. Each guestroom has a large work desk with desk-level outlets, ergonomic chair, and On Command® video, TV video games and complimentary HBO® and USA Today® each weekday morning. The Hilton Garden Inn Evanston in Illinois has a heated indoor pool, whirlpool, fitness center and 24-hour complimentary business center.

ACCOMMODATIONS

- Complimentary wired & wireless high speed internet
- Large work desk with convenient desklevel outlets, an ergonomic Mirra® chair by Herman Miller
- Two dual-line phones with data port and voicemail
- Complimentary remote printing to the business center
- Refrigerator and microwave oven
- Seating area and high definition LCD television
- Sleep Deep with our revolutionary Garden Sleep System bed (in many rooms) providing pressure-free comfort with adjustable firmness settings, fresh & fluffy white duvet and high thread count linens



Hilton Garden Inn

Hotel Services & Amenities For your comfort and convenience.

We worry about the details so you don't have to. Everything. Right where you need it.

- ❑ Automated Teller (ATM)
- ❑ Baggage Storage
- ❑ Coin Laundry
- ❑ Elevators
- ❑ Gift Shop
- ❑ Laundry/Valet Service
- ❑ Local Area Transportation
- ❑ Lounge
- ❑ Luggage Hold
- ❑ On-Site Convenience Store
- ❑ Room Service
- ❑ Safety Deposit Box



For your business convenience:

- ❑ Enjoy complimentary high-speed internet access in every guest room and secure remote printing to the 24-hour business center.
- ❑ Audio/Visual Equipment Rental
- ❑ Business Center
- ❑ Business Phone Service
- ❑ Express Mail
- ❑ Fax
- ❑ Meeting Rooms
- ❑ Modem
- ❑ Photo Copying Service
- ❑ Printer

For your fitness and recreation convenience

- ❑ Work out in the complimentary fitness center, relax in the whirlpool or take a plunge in the pool.
- ❑ Fitness Room

Hilton Garden Inn

MEETING FACILITIES

Looking for Evanston, IL meeting facilities? The Hilton Garden Inn Evanston has over 4,000 square feet of meeting space. Meeting space options include the Lake Shore Room that seats up to 100 reception style to the Northshore Room that will accommodate a banquet of up to 360 people. A small business meeting or a large Evanston wedding reception the Hilton Garden Inn Evanston has the capability and the space to make your next event amazing



RESTAURANTS/LOUNGES

A freshly prepared breakfast is offered daily in the Great American Grill® restaurant, and in most locations, lunch and dinner are also available. The Pavilion Pantry® convenience mart offers sundries, an assortment of beverages and ready-to-cook meals bound for the in-room microwave oven or refrigerator. Beverages are served in the cozy Pavilion Lounge and select properties also offer a full bar.

A Proposal for a Workshop on Hardware Dependability: Impact of Scaling and Energy

- Where: 58th IFIP WG 10.4 Meeting (2010 Summer meeting)
- Organizers: Jacob, Jean and Johan

Some Rationale

- Previous related Workshop quite some time ago already ...
—> 2003 (Monterrey)
- Since then new challenges and opportunities ahead... (IRTS)
- Series of DSN-attached Workshops (Workshop on Dependable and Secure Nanocomputing) — Well-attended, core community-(re)building, very succesful especially this year
- ↗ Interest within DSN:
DSN 2009 —> 9 papers on HW within DCCS
- Chicago appears to be the right central location ...

ITRS* Crosscutting Challenge 5: Reliability

Relaxing the requirement of 100% correctness for devices and interconnects may dramatically reduce costs of manufacturing, verification, and test.

Such a paradigm shift is likely forced in any case by technology scaling, which leads to more transient and permanent failures of signals, logic values, devices, and interconnects.

Several example issues are as follows. 1) Below 65nm, single-event upsets (soft errors) impact field-level product reliability, not only for embedded memories, but for logic and latches as well. 2) Methods for accelerated lifetime testing (burn-in) become infeasible as supply voltages decrease (resulting in exponentially longer burn-in times); even power demands of burn-in ovens become overwhelming. 3) Atomic-scale effects can demand new "soft" defect criteria, such as for non-catastrophic gate oxide breakdown. In general, automatic insertion of robustness into the design will become a priority as systems become too large to be functionally tested at manufacturing exit.

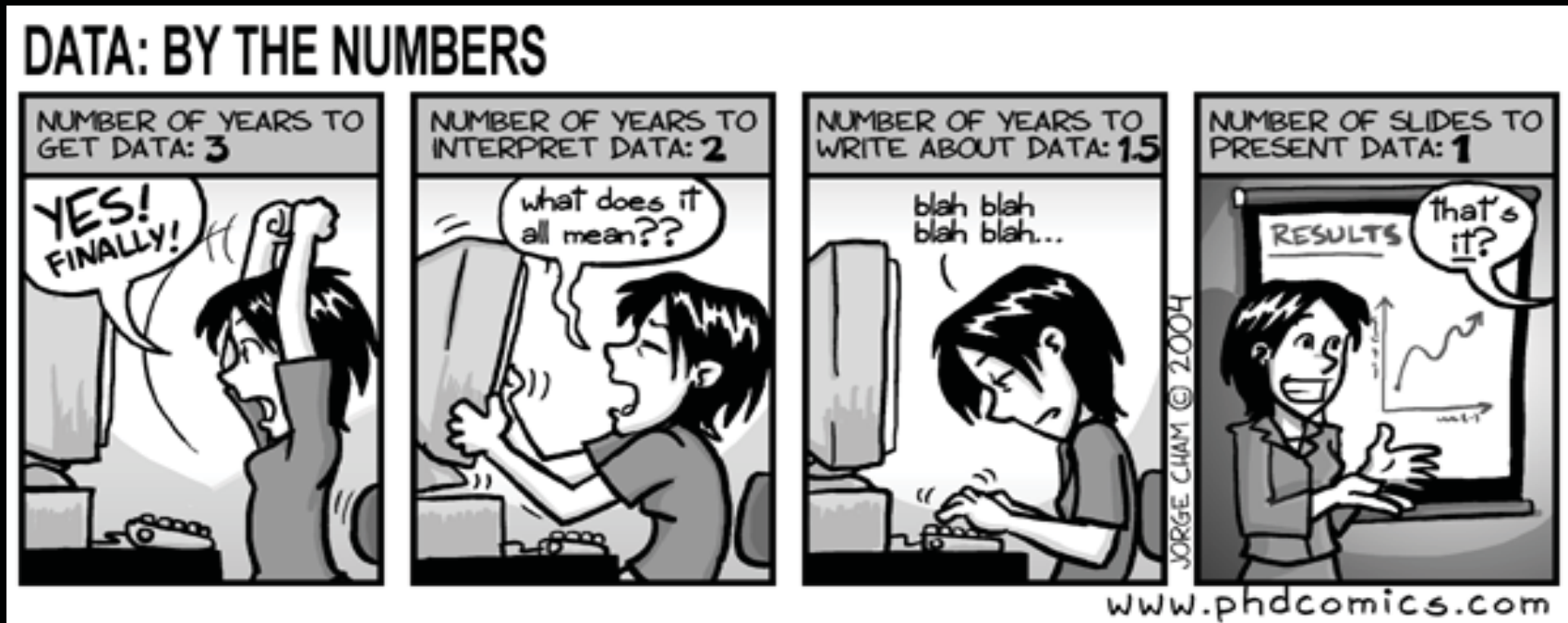
Potential solutions include automatic introduction of redundant logic and on-chip reconfigurability for fault tolerance, development of adaptive and self-correcting or self-healing circuits, and software-based fault-tolerance.

Topics

- Impact of Scaling on Hardware Reliability: Process Variation, Soft Errors, Aging Faults, ...
- Energy *vs.* Dependability
- Mitigation Techniques: HW *vs.* SW
- Processor Architectures: Multicore
- Impact on Embedded Systems Design and Operation
- Impact on Large Scale System Architectures
- Emerging Technologies, e.g., Carbon Nanotubes
- ...

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

Priya Narasimhan, Neeraj Suri, Dan Siewiorek



Motivation

- Systems are getting larger, more complex
- Industry is actively worrying about the ability to understand and analyze these systems
 - Most of all, to be able to determine the root-cause of failures in an accurate and timely manner
- Area: Involves multiple disciplines: Dependability +
 - Machine learning, data mining, signal-analysis, compiler theory, systems, performance analysis,
- Chicago will attract both European and US industry speakers

Purpose of Workshop

- Bring together industry & academic researchers
 - Bring in machine-learning researchers
 - Bring in data-center operators
 - Bring in industry folks with access to real data-sets
 - And, then, us – dependability researchers
- Emphasis on industry participation/speakers
 - Data centers
 - IBM, SAP, Google, HP, Microsoft, Amazon, Facebook, Yahoo!
 - Telecom
 - AT&T Labs, Cisco
 - Embedded automotive, avionics
 - Audi, BMW, Airbus, Fiat, Siemens, General Motors
 - Other industries? Suggestions?

Why Now?

- *SOSP, OSDI, NSDI, Sigmetrics* – all these venues are making data/failure analysis & diagnosis a top priority
- The industry community is targeting its efforts/attendance/data at these other conferences
 - *OSDI* papers on diagnosis in real data centers
 - *SOSP* paper on work on diagnosis in eBay system
 - *SOSP* papers on diagnosis for Microsoft's email systems
 - *Sigmetrics* paper on diagnosis in corporate networks
- *But this work started at DSN years ago!*
 - Many people in our community care about & work in this area
 - Want to see DSN become *the hub* for this topic
- We have a chance to impact *production systems* if we get industry's attention and show our renewed interest in this area

What Will We Get Out of It?

- Articulation of research challenges in this space
- Understanding of current state-of-the-art (industry & academic) and what is lacking
- Connections with industries that have real data-sets of interest to us
- Case studies from industries with real-world problems in this area
- Increased external awareness of IFIP activity and leadership in this space
- Hopefully, more papers at DSN in this area that are partnered up with industries we invited

Initial Speaker List

- *Initial* industry candidates
Werner Vogels, Amazon
Eric Baldeschweiler, Yahoo!
Moises Goldszmidt, Microsoft
Brendan Murphy, MSR
Matti Hiltunen, AT&T
John Wilkes, Google
Dhruba Borthakur, Facebook
Jeff Hammerbacher, Cloudera
Kim Keeton, HP
Volkmar Lutz, SAP
Bernhard Kohler, UBS
Mod Marathe, Cisco, U.K.
Thomas E. Fuhrman, General Motors
Multiple contacts at BMW, Audi, Airbus,
etc
:
- Testbed/system candidates
OpenCirrus
PlanetLab
- *Initial* academic candidates
Hermann Kopetz
Jacob Abraham
Miroslaw Malek
Ravi Iyer
Bill Sanders
Andrea Bondavalli
Kishore Trivedi
Aad van Moorsel
:

SIG Reports

- **SIG on Dependability Benchmarking (SIGDeB)**
- **Two new SIGs approved!**
 - ◆ **SIG on Concepts and Ontologies**
 - ◆ **SIG on Education in Resilient Computing**

59th Meeting (winter 2011)

- Location: ??
- Workshop: ??

Upcoming Events

- LADC-2009 (4th Latin American Symp on Dependable Computing), Joao Pessoa, Brazil, September 2009 (in-cooperation)
- 15th IEEE PRDC Symp., Shangai, China, November 16-18, 2009. [<http://prdc09.shu.edu.cn>]
- 8th European Dependable Computing Conference, Valencia, Spain, April 28-30, 2010 [<http://edcc.dependability.org>]