INFORMS Roundtable Fall Meeting Agenda [DRAFT 1.2]
November 6-7, 2010
Hilton Austin
500 East 4th Street
Austin TX 78701

THEME: "OR in the Cloud"

Saturday, November 6, 2010

3:45PM *Outing – Duck Boat Tour (www.austinducks.com) – Tour the city and Lake Austin*
Meet in the Hilton Austin lobby at 3:45pm for a 4:00pm sharp departure

5:30PM *Reception*

6:15PM *President's Welcome and Agenda Overview*

Jeff Winters, Roundtable President

6:30PM *Keynote: Michael Crandell – Realizing the Benefits of Cloud Computing*

Cloud computing promises to dramatically change the way information technology is used and acquired. Today, many organizations are already experiencing the benefits of "the cloud," including significant productivity gains, IT cost savings, and greater business agility. Citing real-world examples, Michael Crandell will outline how cloud computing is currently being used, with a focus on compute-intensive applications found OR/MS such as grid computing and batch processing. He will also describe how businesses today can remove the complexities of deploying, monitoring and managing applications in the cloud through an easy-to-use management interface and pre-configured components.

Michael Crandell is the CEO and a founder of RightScale, a leader in cloud computing management services for Amazon Web Services, Rackspace and other platforms, where he provides the vision and direction for the company as it pioneers innovative ways to bring the power of cloud computing to any organization. Crandell is a frequent speaker at cloud computing industry conferences, and he has played a major role in helping establish and promote openness and transparency in the cloud market. Prior to RightScale, he served as CEO at several Internet Software-as-a-Service (SaaS) companies and as executive vice president at eFax.com. Crandell received his B.A. from Stanford University and completed graduate studies at Harvard University.

7:45PM *Dinner*

7:00AM   *Continental Breakfast*

8:00AM   *Roundtable Introductions*

8:30AM   *Session 1: Gunther Lenz – Cloud Computing for Application Development, Business Intelligence, and Collaboration*

Leveraging the new cloud paradigm creates business value and can create a strategic, competitive advantage. In this session, Gunther Lenz will discuss the patterns for cloud adoption, as well as potential pitfalls, and the differences between SaaS, IaaS, PaaS, and ITaaS offerings. He will discuss how Microsoft provides a flexible platform for adoption of the new cloud paradigms, while enabling the preservation and integration of existing IT investments. Gunther will introduce the Microsoft Azure Platform and the Business Productivity Online Suite (BPOS), Microsoft's current cloud offerings, and will describe examples of companies that have successfully adopted the new paradigm.

Gunther Lenz is the author of two books, invited speaker at international conferences, and an ISV Architect Evangelist at Microsoft. Gunther works with the top 2% of Microsoft Independent Software Vendor (ISV) partners in the NY/NJ/PA area to drive the adoption of new and emerging Microsoft technologies. He focuses on exposing synergies between these partners' product technology strategies and the Microsoft technology roadmap, with a goal of increasing competitive advantage and opening new revenue streams for the Microsoft partners. Before joining Microsoft, Gunther worked as program manager and senior consultant for software architecture at Siemens. Gunther also received the Microsoft Most Valuable Professional (MVP) - Solution Architect award in 2005/2006/2007/2008. He has a master's degree in EE from TU Munich and an MBA from NYU Stern.

9:30AM   *Session 2: David Jensen – Experience Using IBM's Cloud Computing Offerings for OR Applications*

This talk will review some IBM offerings for private, public and hybrid cloud computing. David Jensen will discuss several projects that illustrate various uses of clouds, including the use of virtualization and elastic capacity, to provide solutions to problems in the domain of Operations Research. He will also describe some of the ways that he and others are using cloud computing within IBM Research to support independent and collaborative research in data mining, statistics, and optimization.

David Jensen is the Chief Technical Officer for the Business Analytics and Mathematical Sciences Department of IBM Research, and has been instrumental in the design and deployment of data and computational analytics for customer applications for hierarchical forecasting, stochastic modeling, and cloud based tuning of optimization algorithms. Early in his IBM career, Dave worked on the Optimization Subroutine Library (OSL) making significant contributions to the quadratic programming, network flow, and graphical user interface codes. He also worked on a number of applications of OSL including applications to portfolio optimization and inventory management. He has worked with a number of customers such as Schneider Logistics on integration, customization and tuning of COIN-OR optimization code with Java-based stochastic optimization on compute grids, and Charles Schwab on design, implementation, and tuning of a grid implementation and deployment of a portfolio valuation application.

10:30AM   *30 minute Break*

11:00AM   *Session 3: Robert Fourer – Cloud Pioneers: Experience with NEOS and Optimization Services*

Today's move to cloud computing was foreshadowed by research reported at a number of past INFORMS meetings. The NEOS Server, hosted at Argonne National Laboratory and representing a collaboration of many members of the optimization community, has offered "optimization as a service" for over a decade. Optimization Services is a more recent initiative that offers a unified framework for distributed optimization over the Internet, including a set of XML-based protocols implemented by open-source software libraries (available at COIN-OR). Bob will review both of these efforts, and the experience gained solving tens of thousands of optimization problems each month with this pioneering "OR in the cloud."

Robert Fourer is Professor of Industrial Engineering & Management Sciences at Northwestern University and a partner in AMPL Optimization LLC. He was introduced to optimization and OR in the mid-1970s through a linear programming project led by William Orchard-Hays at the National Bureau of Economic Research. As a visiting member of technical staff in Computing Sciences Research at Bell Laboratories, he worked with David Gay and Brian Kernighan to create the AMPL optimization modeling language, which has been successfully commercialized. Subsequently he was a key contributor to the NEOS Server project – perhaps the first and most widely used "OaaS" offering – and the Optimization Services initiative. He is a recipient of the INFORMS Fellow Award and co-winner of the INFORMS Computing Society Award, for AMPL, and the Mathematical Programming Society's Beale-Orchard-Hays Prize, for the NEOS Server. He holds a BS in Mathematics from M.I.T. and a PhD in Operations Research from Stanford University.

12:00PM   *Lunch:*

1:30PM   *Session 4: Edward Rothberg – The Gurobi Optimizer and Amazon Web Services*

Gurobi Optimization has been aggressively exploring alternative delivery models for optimization technology since its inception. Gurobi released its first cloud computing offering (via Amazon EC2) in October 2009. The company has learned a lot about the promise and limitations of this new platform since then. Ed will describe Gurobi's cloud computing product, discuss their experiences with it so far, and talk about their expectations for the future.

Edward Rothberg is Chief Operating Officer and co-founder of Gurobi Optimization, and a key architect of the Gurobi LP/MIP Solver. Earlier in his career he was a computational scientist in the Intel Super-computing Systems Division, and a supercomputing application specialist at Silicon Graphics, Inc. He joined CPLEX Optimization in 1997, working as a senior developer for a year before becoming the Senior Director of CPLEX R&D. He led the CPLEX team through the development of CPLEX 7-10, and was responsible for the implementation of the CPLEX Barrier solver, QCP solver, and several of the cutting plane and heuristic methods in the CPLEX MIP solver. He has published numerous papers in the fields of linear algebra, parallel computing, and mathematical programming, and is one of the world's leading experts in sparse Cholesky factorization and computational linear, integer, and quadratic programming. He is particularly well known for his work in parallel

sparse matrix factorization, and in heuristics for mixed integer programming. He has a BS in Mathematical and Computational Science from Stanford University, and an MS and PhD in Computer Science, also from Stanford University.

2:30PM   Session 5: Daniel Fylstra – Frontline's Solvers and Windows Azure

Frontline Systems' customers frequently want to deploy an application of optimization or simulation to users in many geographic locations, most often on an Intranet or Web server – with all the attendant issues of IT provisioning, scaling, security and maintenance. Cloud computing platforms like Windows Azure promise to simplify all of these issues for application developers. Dan will describe Frontline's experience implementing its Solver Platform SDK product as a service on Windows Azure, enabling users to upload and solve models in MPS files, Optimization Services OSiL files, and Excel workbooks in the cloud. Much of this experience should be relevant for implementing any OR application written for a Windows operating system on the Windows Azure platform.

Daniel Fylstra is the CEO and founder of Frontline Systems, where he is responsible for the technology and marketing vision and direction of the company. Frontline developed the Solvers in Microsoft Excel, Lotus 1-2-3 and Quattro Pro, distributed to more than 500 million spreadsheet users, and licenses its more powerful optimization and simulation products to more than 5,000 companies worldwide. Mr. Fylstra was also co-founder and Chairman of Compass Modeling Solutions, a leading marketer of the AMPL modeling language (later acquired by ILOG), and co-founder and President of Sierra Sciences, a biotechnology firm. Earlier in his career, Mr. Fylstra was founder and Chairman of VisiCorp, marketers of the first spreadsheet program VisiCalc. He has a BS in EE and Computer Science from M.I.T., and an MBA from Harvard Business School.

3:30PM   30 minute Break

4:00PM   Roundtable Business Meeting

4:30PM   Roundtable/INFORMS Board Meeting

5:30PM   INFORMS President's Reception for the Roundtable

<u>**Monday, November 8, 2010**</u>

6:30PM   Informal Networking Dinner (Dutch Treat)

The Dutch Treat Dinner will be held at:

>**Moonshine Patio Bar & Grill**,
>303 Red River Street, at 3rd Street
>512-236-9599
>www.moonshinegrill.com

Participants should meet in the hotel lobby at 6:00p.m.
The restaurant is a short walk (about one block) from the hotel.

HILTON AUSTIN CONVENTION CENTER - FOURTH FLOOR

terrace

MR 404

MR 402

MR 400

prefunction

BR 403

BR 401

rest room

rest room

SALON B

SALON A

GOVERNOR'S BALLROOM

prefunction

SALON C

SALON D

SALON E

MR 415

MR 406

MR 408

MR 410

MR 412

rest room

restroom