Microsoft

Microsoft Research Faculty Summit 2013

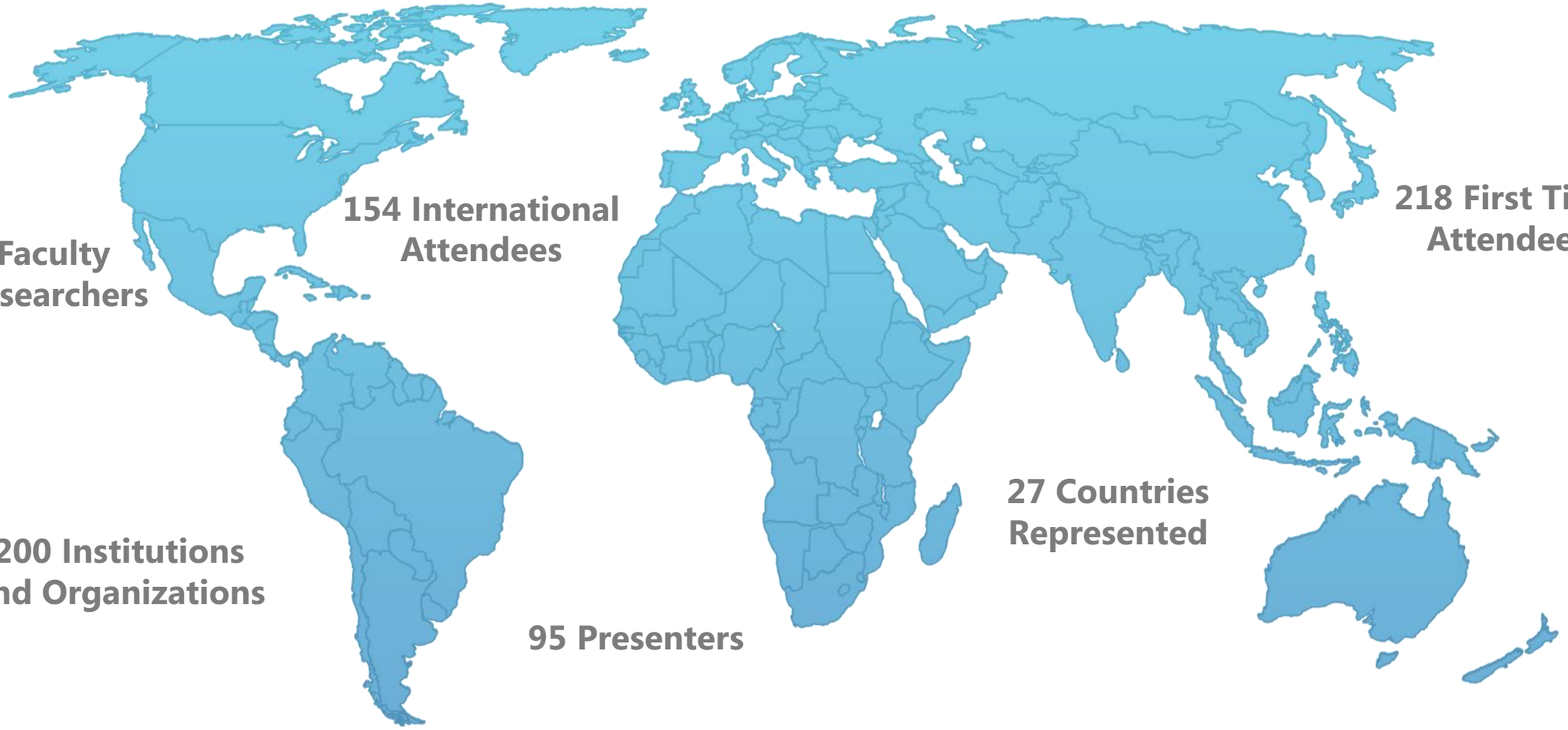
Microsoft

Welcome

Tony Hey
Vice President
Microsoft Research Connections

Microsoft Research
Faculty Summit

Welcome to Faculty Summit 2013



BIG DATA + MACHINE LEARNING + CLOUD =

INFORMED, INTELLIGENT DECISIONS

Cliff Maas on the Yarnell Hill Fire

Hours before the incident it was clear there was a real threat…satellite and radar showed developing convection to the north that was moving south towards the fire.

High-resolution numerical models showed a threat. Were there any meteorologists working the fire? If not, why not? This terrible tragedy needs to be reviewed carefully.

A number of media outlets called the strong winds unpredictable and random. This is not correct, as shown by the information I provided above.

http://cliffmass.blogspot.com/2013/07/the-yarnell-hill-fire-meteorological.html

Greek forest fires kill 56 as blaze nears Athens

Image 1 of 2

A hot, dry summer and a three-day heatwave with temperatures of 40C created the tinderbox conditions

By Roya Nikkhah and Emma Henry
4:00PM BST 26 Aug 2007

Massive forest fires which have killed at least 56 people in Greece are racing towards the site of the ancient Olympics.

Video: Greece on fire
In pictures: After the flames

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EU unplugged
Bruno in Brussels

EU news from our Brussels correspondent

Virtual Fire

Virtual Fire (VF) is an early warning and decision support system for integrated forest fire management, based on geoinformatics and modeling fire risk.

University of the Aegean,
University of Athens,
MS Hellas/MIC in Greece,
and Microsoft Research

Venus-C
Virtual multidisciplinary EnviroNments USing Cloud infrastructures

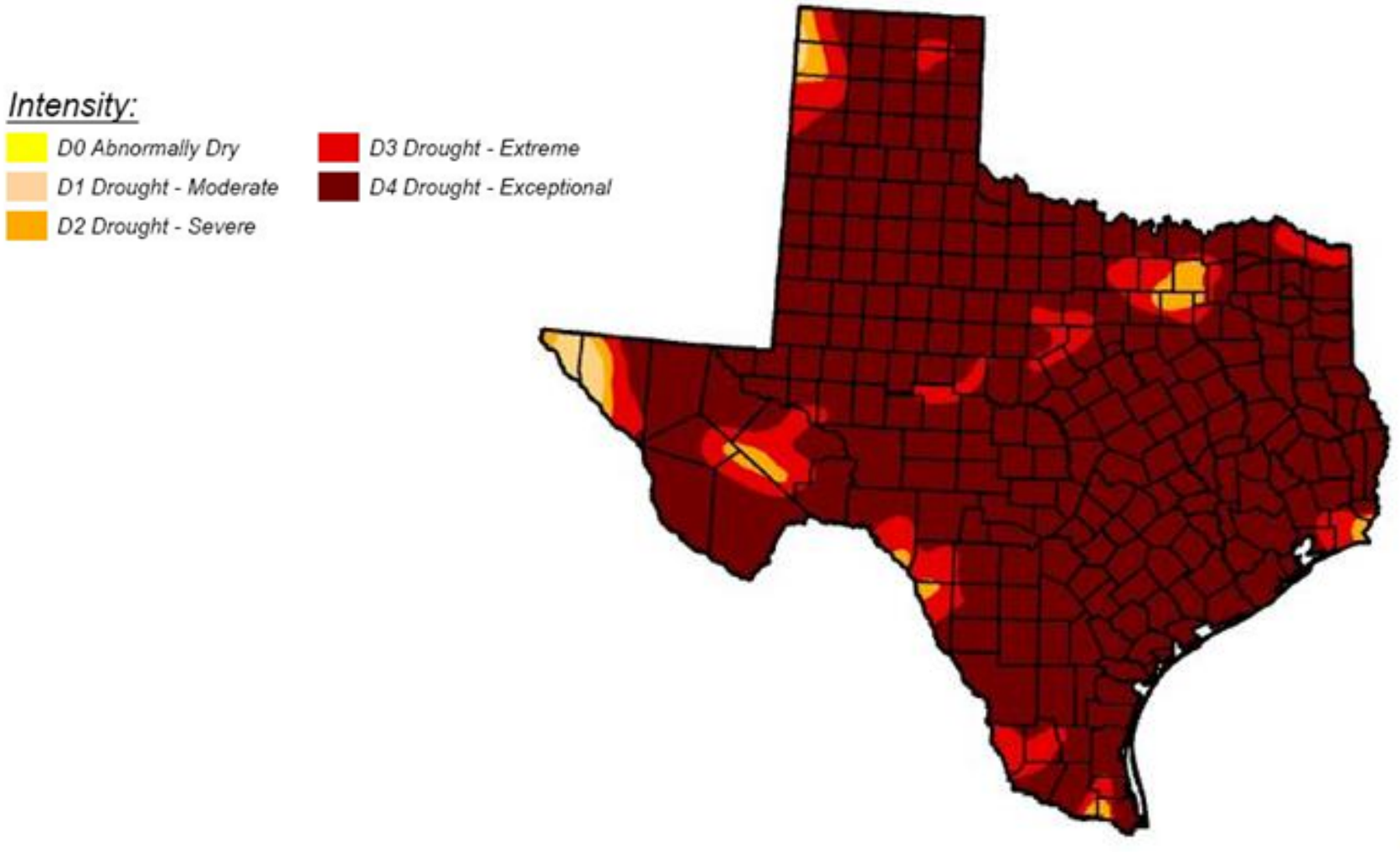
Windows Azure

West Central Texas
Drought Conditions
Update – July 4, 2013

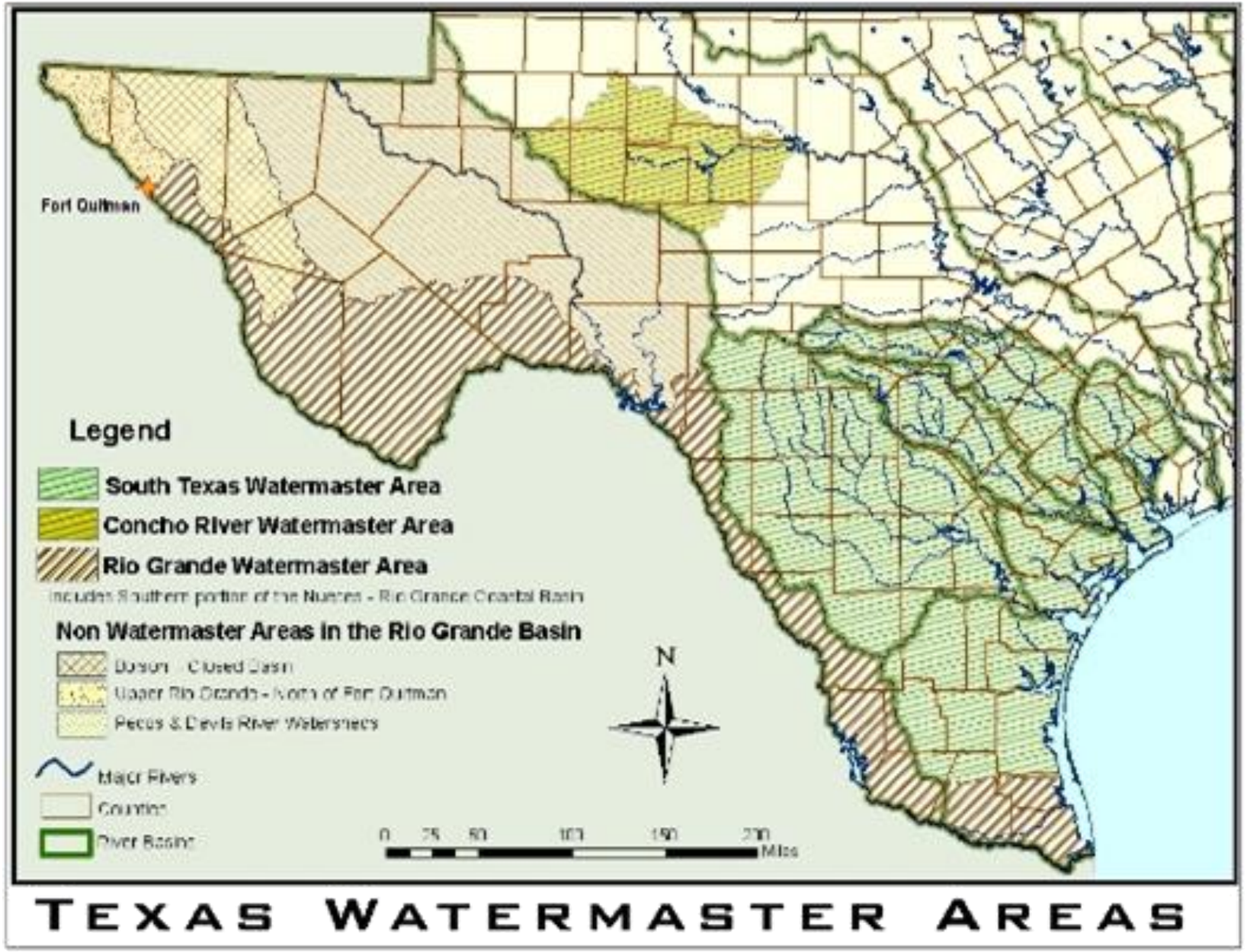
U.S. Drought Monitor

October 4, 2011
Valid 7 a.m. EST

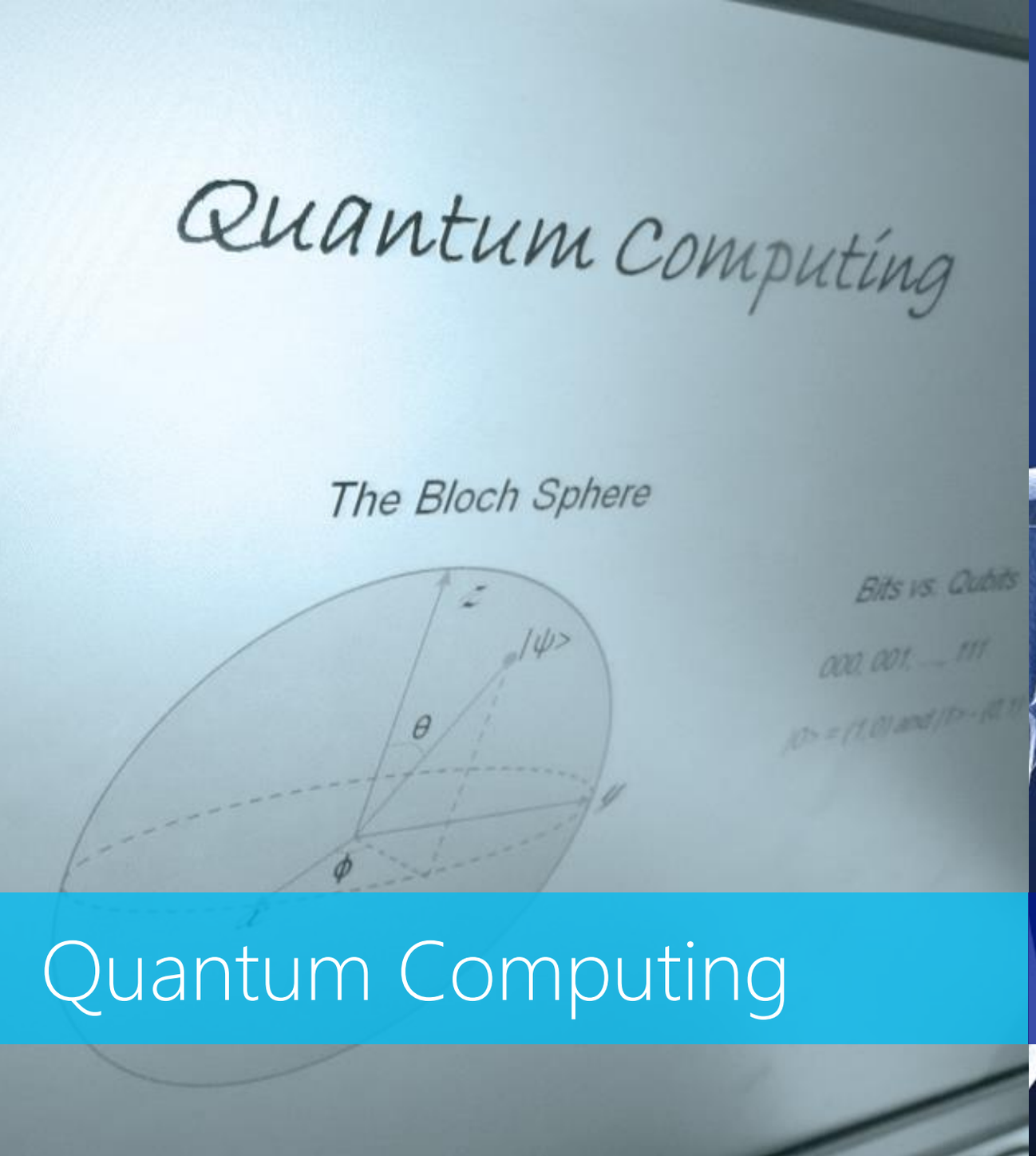
Texas



Texas River Systems



TEXAS WATERMASTER AREAS



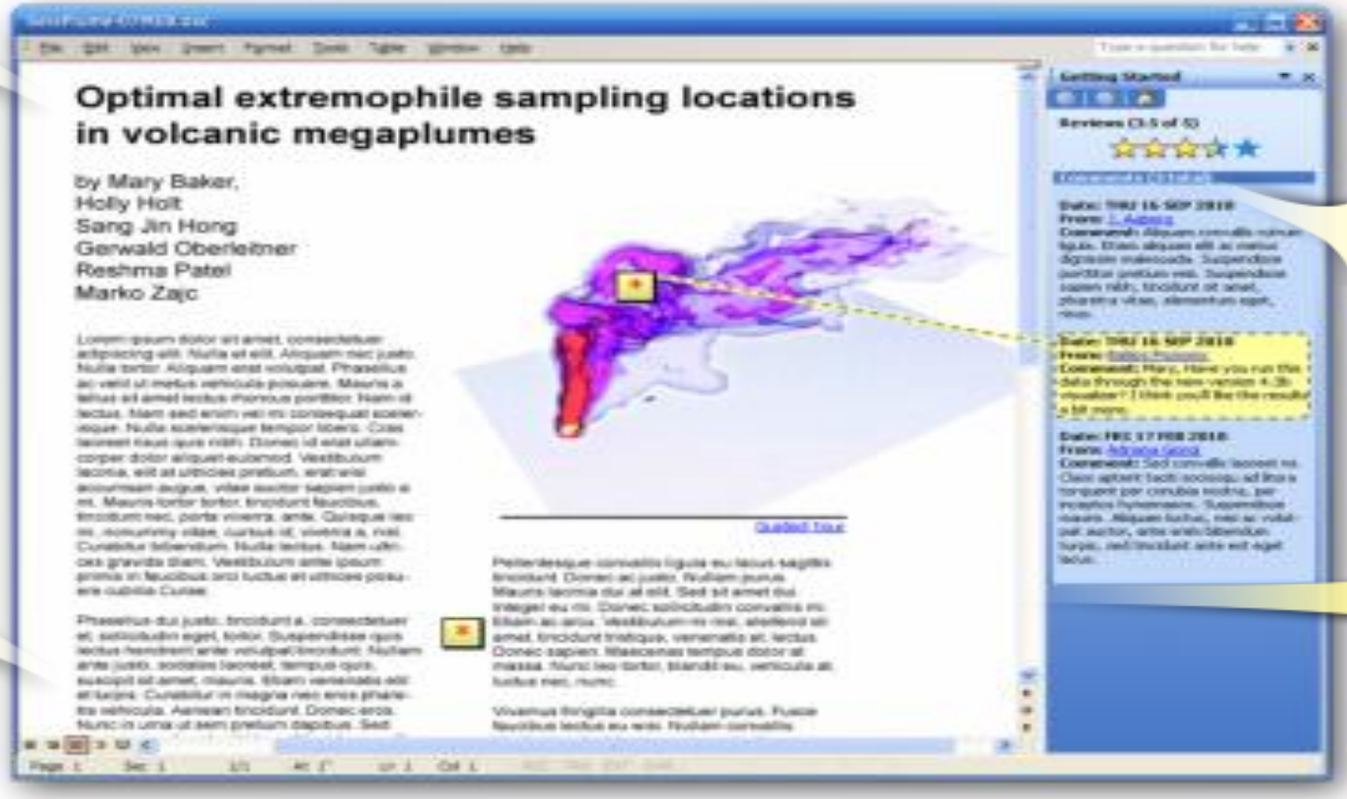
Quantum Computing

Genomics

Envisioning a New Era of Research Reporting

Reproducible Research

Collaboration



Reputation & Influence

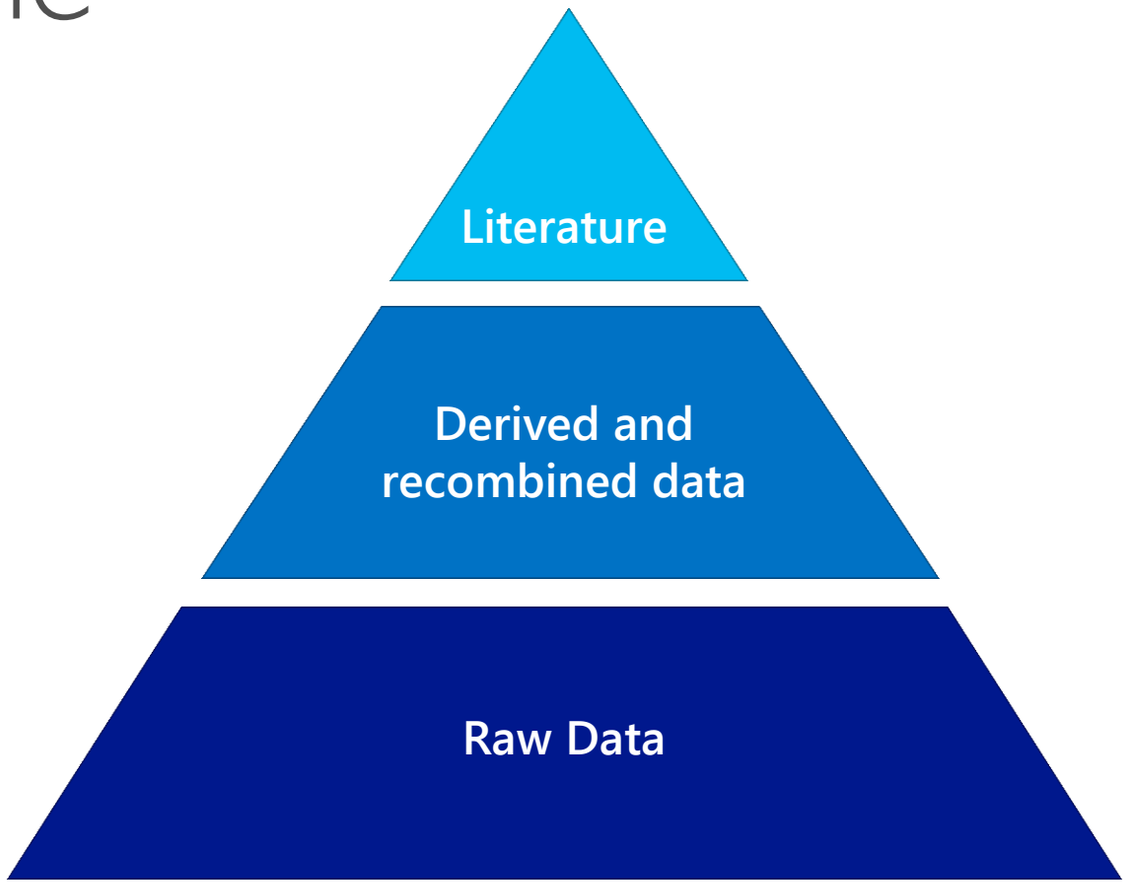
Interactive Data

Dynamic Documents

Slide from Bill Gates SC05

All Scientific Data Online

- Many disciplines overlap and use data from other sciences.
- Internet can unify all literature and data
- Go from literature to computation to data back to literature.
- Information at your fingertips – For everyone, everywhere
- Increase Scientific Information Velocity
- Huge increase in Science Productivity



(From Jim Gray's last talk)

The Future
of Computing

The Future of Computing

Over **2,500** **academics and scientists** from **500+** universities have attended Faculty Summit (Redmond) since 2000

60 **Faculty Fellowships** awarded since 2005 in North America

250 **researchers** from **50** **universities** in **16** **countries** have joined the Latin American and Caribbean Collaborative ICT Research Federation (LACCIR)

60 **students** worldwide awarded Ph.D. fellowships and scholarships in 2012

465 **students** from more than 35 countries have interned at our Cambridge (UK) lab since 2006

50 **Graduate Women's Scholarships** awarded since 2008

In Asia, over **450** **top students** awarded **Stars of Tomorrow** internships every year

1,765 **people** attended our **Techvista 2012 symposium in Kolkata**

Over **200** **Ph.D. student fellowships** awarded since 2004 in Europe

Microsoft Research collaborates with over **100** **top universities** in North America

2,000 **students, faculty and research scientists** attended our Computing in the 21st Century conferences in Tianjin

35,000 **scientists, academic researchers, faculty and students** have attended our summits, conferences, workshops since 2008

Over **1,100** **students** selected annually for lab internships in the U.S., China, India and UK

90 **students** and young faculty attend our India Summer School Program every year

Microsoft Research