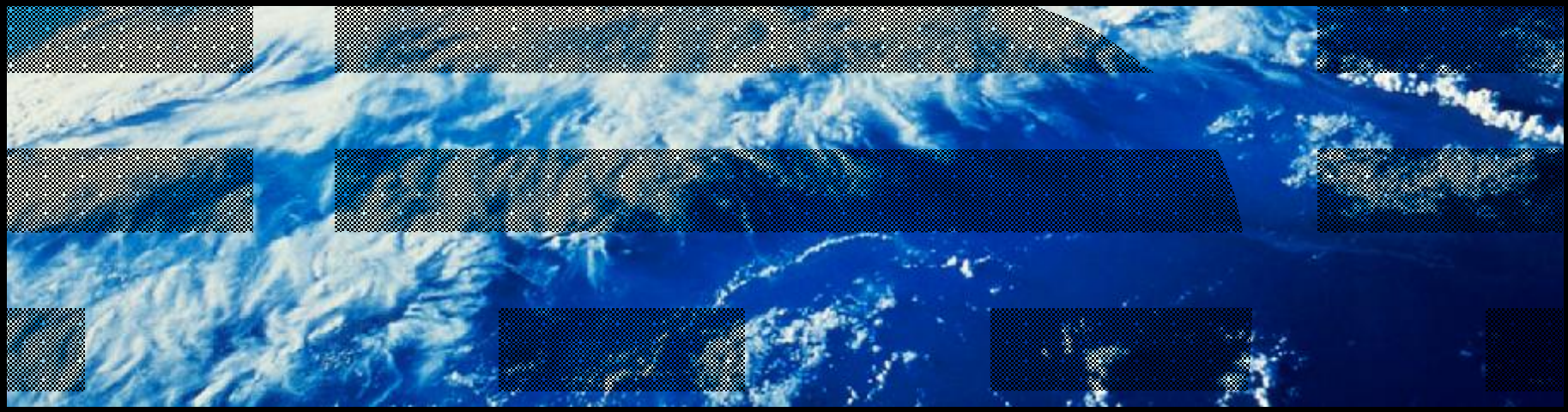
ICT Development In U.S. and Chinese Contexts



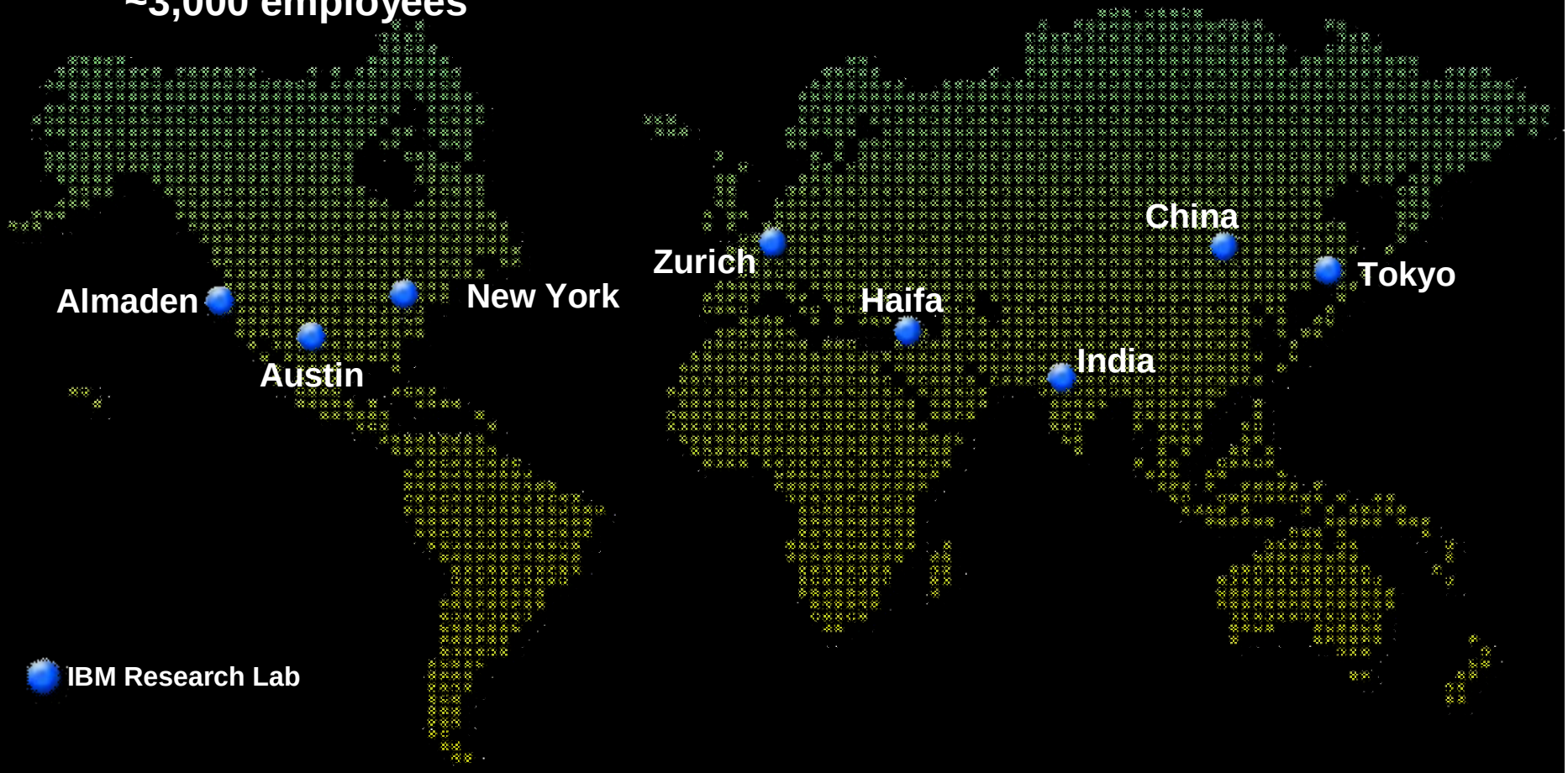
Dr. Mark E. Dean

IBM Fellow and Vice President, Strategy and World-wide Operations

IBM Research

IBM Research

~3,000 employees



IBM Research: Collaborative Innovation

2010 Research Themes

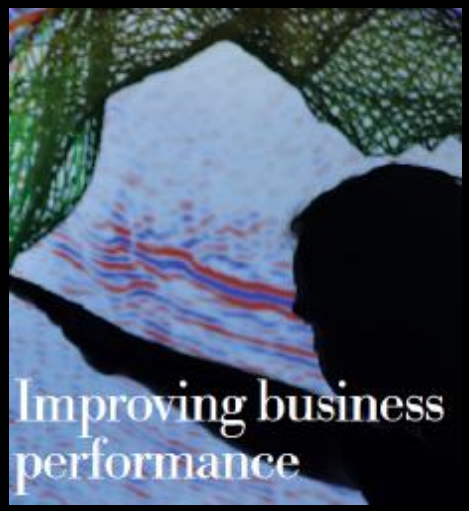
- Globalization and Economic Downturn
- Healthcare and Energy

- System of Systems
- Explosion in Digitizing the World
- Need for Accurate and Trusted Models

- Rigidity of Packaged Applications
- Integration Remains the Key Strategic Priority
- Early Adoption of Cloud Computing Delivery Models

- Explosive Growth of Wireless Traffic
- Cost/Power/Performance/Time-to-Value

Reimagining How Science and Technology Can Have Impact



Reducing traffic jams by modeling them

Redesigning the energy grid by synchronizing supply

Reducing CO2 while boosting business efficiency

APPLYING WORLD'S BEST THINKING TO WORLD'S MOST DIFFICULT PROBLEMS

IBM's Journey in China

1979	1992	2002 - Present
• **Invest to Learn** • Establish presence in China – Offshore operation – Single city – Sales only	• **Invest to Grow in China** • Broader presence - Multi-cities - Multiple relationships - Multiple lines of business	• **Invest to Grow with China** • Leverage China's strengths

Our R&D Presence in China

China Research Lab (CRL)

- 1995- one of the 8 IBM research Labs
- 2008 CRL Shanghai lab established
- 200+ researchers
- A balanced research agenda
- Comprehensive collaborations with academia, clients, business partners and government.

China Development Lab (CDL)

- Established in 1999
- One of the biggest development labs of IBM
- 5000+engineers
- Development of all IBM software core products synchronously with the whole world
- Focus on industry solutions
- Focus on software services and technical support

China Systems and Technology Laboratory (CSTL)

- Started in 2004 and officially established in 2007
- Located in Beijing, Shanghai and Taipei
- 1200+ engineers specializing in systems, system software, storage, semi-technology…

IBM Research - China: Execution Strategy

- **"In-Market" Research approach, including investment from Clients/Partners**
- **Open, Global Collaboration for Time-to-Value**
- **Deliverable technologies based on Research assets**
- **Resource Allocation Portfolio**
  - Supporting existing business: (currently 30% **à** 20%)
  - Creating technology for incremental business: (50% **à** 50%)
  - Exploring new technology & business model: (20% **à** 30%)
- **Effectively using assets in China**
  - Massive Data, Massive Usage Points
  - Strong government investment agenda
  - Receptive to IBM collaboration model
  - Established relationship and client base
  - Good skill pool

Growing with Our Business Partners

- Our business partners contributed 60%+ of our revenue (STG + SW + Services)
- Nearly 10,000 business partners spreading in 350+cities
- 340 courses under IBM Channel University cover 30,000 audiences from 3000+ Business Partners in 130+ cities

Partnering with 60+ Leading Universities

- Over 100 Joint Labs & Joint Technology Centers
- Over 80 special university programs with 20+ universities
- Trained over 860,000 university students and 6,500 teachers Certified 80,000 students
- Initiated Service Science curriculum with leading universities across China

Over 10 years of long-term comprehensive strategic cooperation with MOE

Our Top Scientists in China

Matt Wang

IBM VP

GM of CDL

Thomas Li

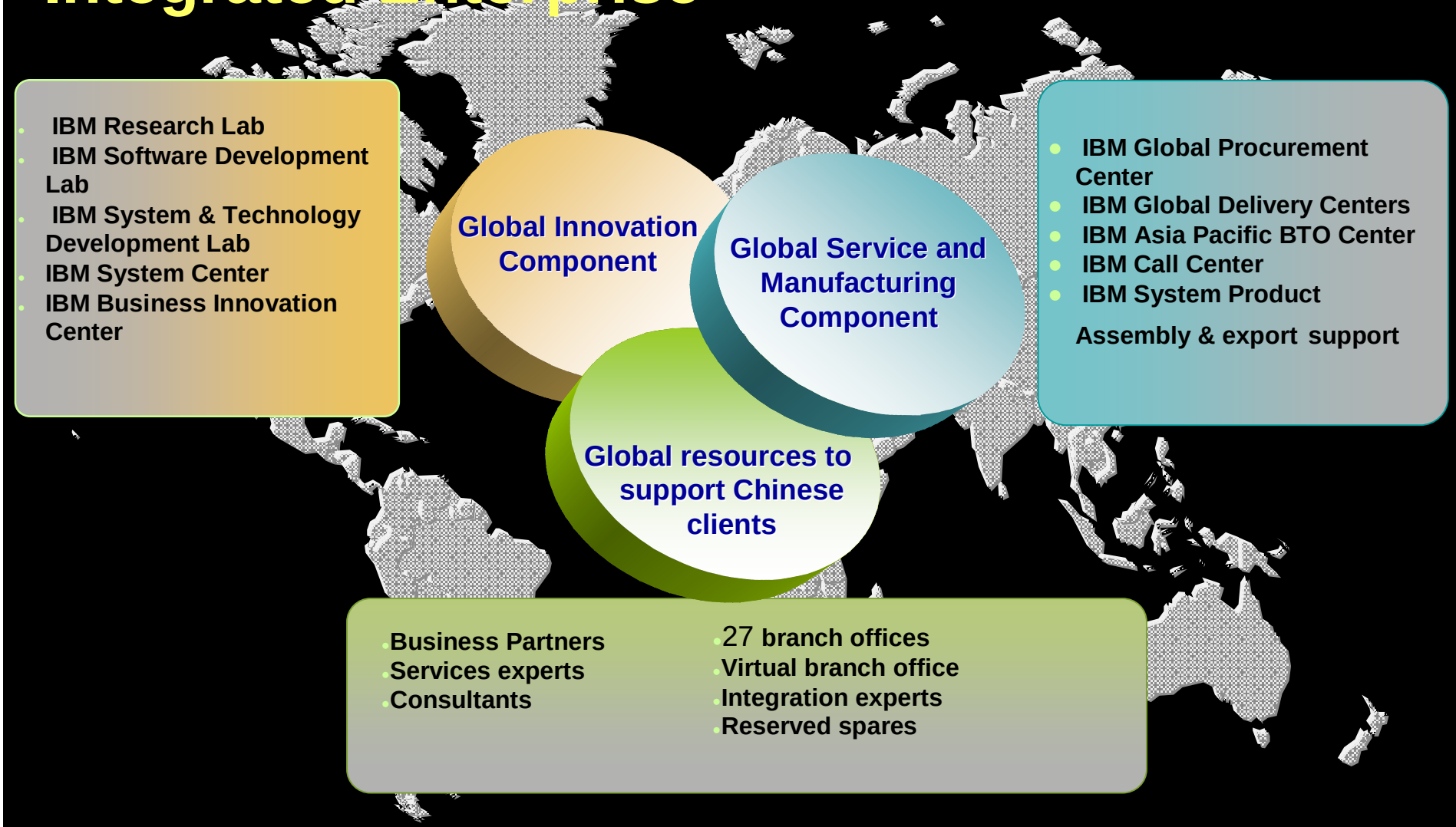
CTO, IBM GCG
Director of CRL

Cheng-Fong Shih

IBM VP

GM of CSTL

IBM China - Component of Globally Integrated Enterprise



- IBM Research Lab
- IBM Software Development Lab
- IBM System & Technology Development Lab
- IBM System Center
- IBM Business Innovation Center

- IBM Global Procurement Center
- IBM Global Delivery Centers
- IBM Asia Pacific BTO Center
- IBM Call Center
- IBM System Product

Assembly & export support

- Business Partners
- Services experts
- Consultants

- 27 branch offices
- Virtual branch office
- Integration experts
- Reserved spares

Smarter City - Shenyang

Shenyang - Smarter City - Today and Future

Shenyang Eco-city Research Institute

- Shenyang municipal government expects to be the first "Smarter City" in China
- Partnership with Shenyang, Northeastern University and IBM over 5 years, $40M
- Develop solutions which can be replicated WW
- Initial projects focused on
  - Water purity management
  - Food safety
  - Energy and related Carbon management
  - Planning integrated city management approach
- Central and regional governments using this collaboratory as a potential new model

Principles

- 5-year commitment for Research Institute from Shenyang
- Roadmap: Research-> Pilot -> Incubation
- Support Shenyang's eco-city development, aim at replication in China and WW

Energy and Utility Industry

Intelligent Distribution Assessment & Planning (IDAP)

Technology Development:

- Utility companies can evaluate existing utility networks
- Develop optimal investment plan to meet emerging & dynamic demands

Potential Partners

- Tianjin Power, Chongqing Power, Yunnan Power

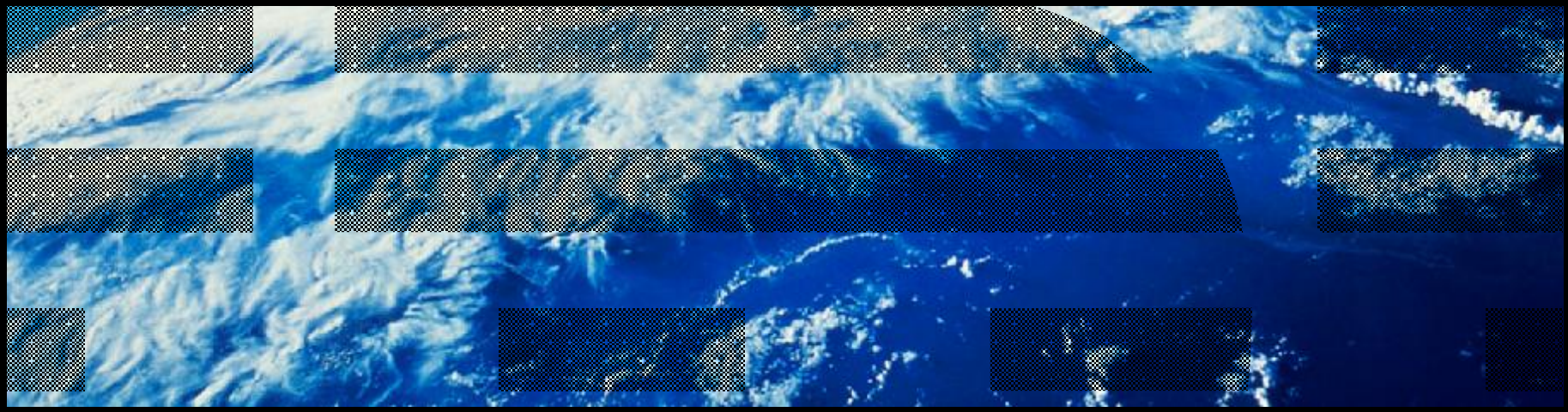
Outcomes:

•Power Consumption, Load

•Substation Capacity
•Power Line Length & Diameter
•Network Structure

•New Substation Locations
•Power Line Routes
•Budget & Construction Plan

Thank You



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Building the 21st Century:

U.S. - China Cooperation on Science, Technology, and Innovation

May 18, 2010
Washington, DC

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine