

IBM INSTITUTE
for Advanced Commerce

Conference on Master's Degree Education
in Electronic Commerce

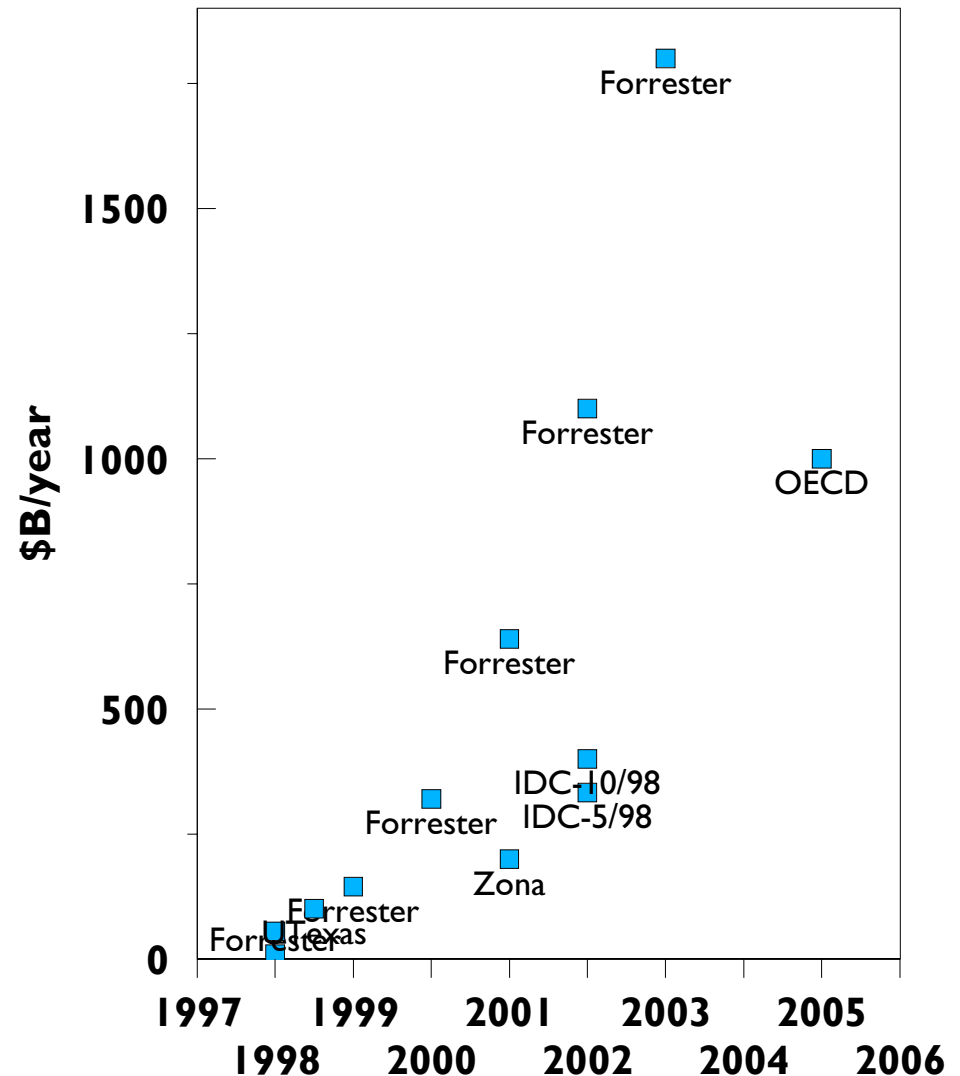
Introductory Remarks

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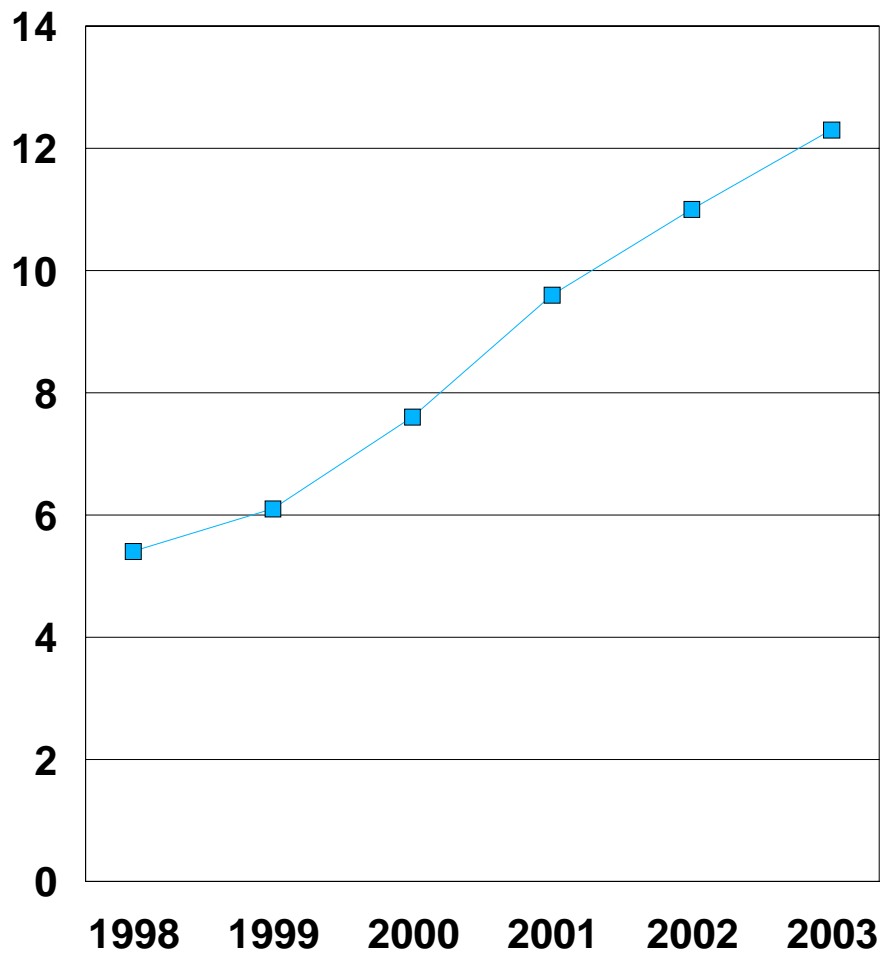
Forecasts

- E-C doubles every 9-12 months
- 1998 estimates: \$8B-50B
- By 2002, E-C >1% of Global Economic Product
- By 2005, E-C >5% of GEP
- US currently dominates
- B2B exceeds B2C by factor of 5 through 2005
- Numbers exclude Foreign Exchange (\$1.2T/day), Securities (>\$100B/day), interbank transfers (>\$2T/day)

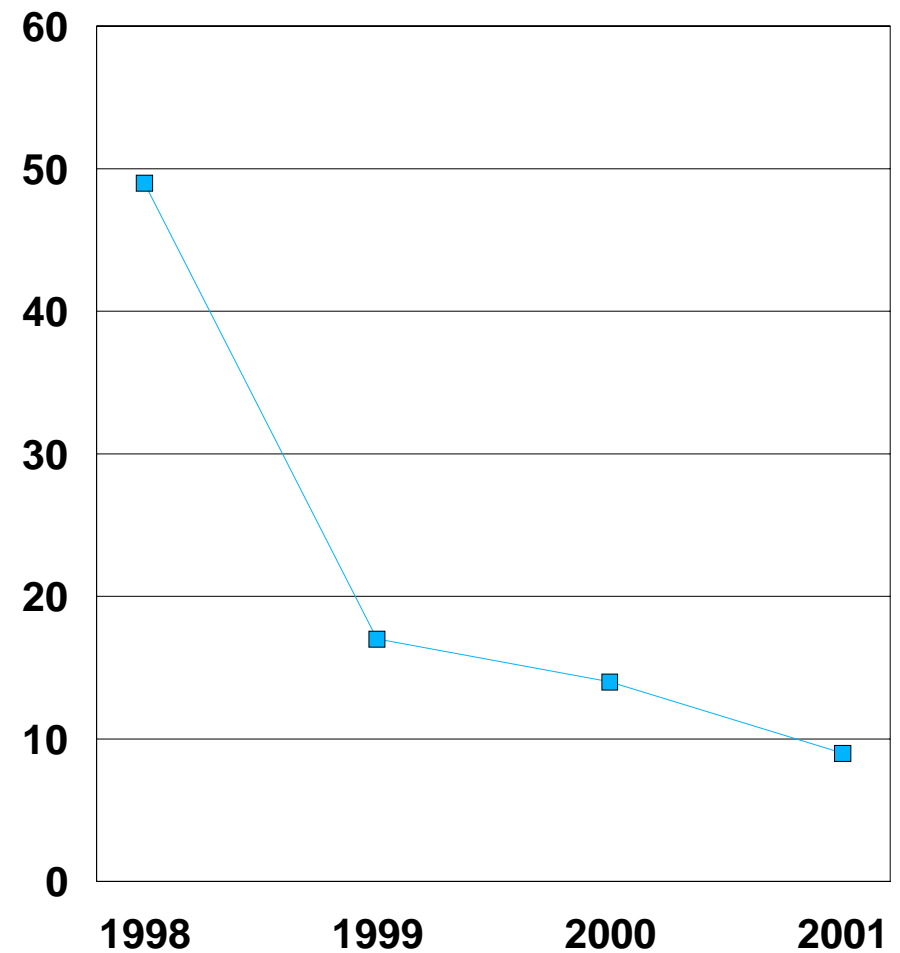


Forrester Consulting Estimate Ratios

US \$B2B / \$B2C



US/Europe



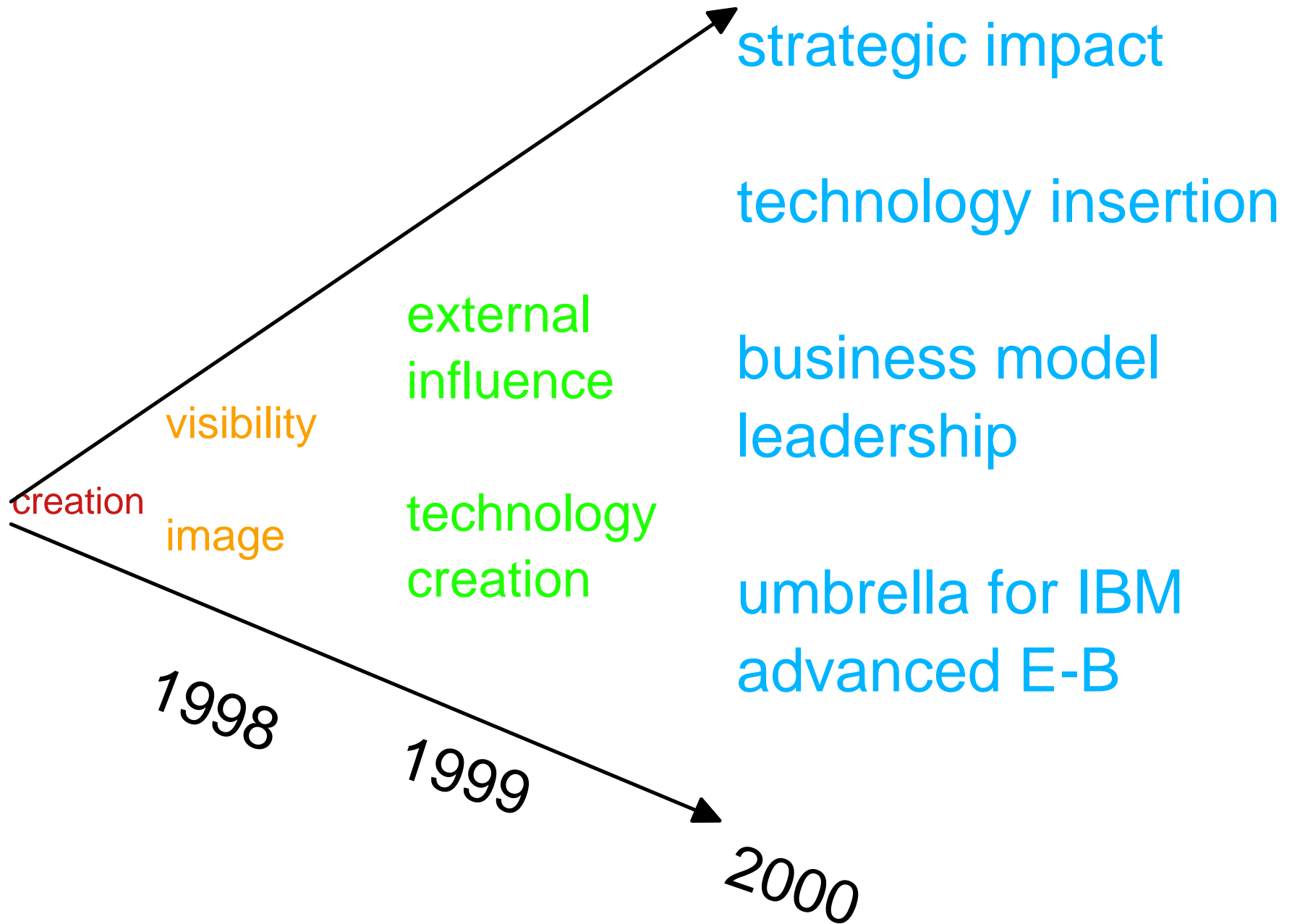
Internet Economy Estimates - US

U. Texas Study 10 June 1999

	Estimated Internet Revenues	Attributed Internet Jobs
Internet Infrastructure	\$115B	372K
Internet Apps	\$56B	230K
Internet Intermediary	\$58B	252K
Internet Commerce	\$101B	482K
Total Internet (corrected for double counting)	\$301B	1.2M

Growth rate over 4 years: CAGR=174%,
(doubling time = 9 months)

IAC Directions



Advancing Technology - Capacity

	Typical Today	Coming
Access bandwidth	56 kb/s	Mb/s
Backbone b/w	155 Mb/s	622Mb/s -> 2.5Gb/s -> 1.6 Tb/s ->
Intercontinental b/w	45 Mb/s	155Mb/s -> 2.5Gb/s ->80+ Gb/s
Wireless	2.4->9.6 kb/s	2Mb/s -> Gb/s
Caching	10 GB	TB s
Enterprise DB size	10 TB	100 TB -> PB
Super computing	GIPS	3 TIPS -> 100 TIPS

IAC: Eight Research Themes & Related Projects

- Evolving Marketplace
 - ▶ e-marketplaces, brokerage, information economies, multi-agent systems
- Privacy
 - ▶ policy, P3P standard, Enterprise Privacy Mgmt
- Variable Prices and Negotiated Dealings
 - ▶ auctions, advanced negotiations
- Direct Business to Business Interactions
 - ▶ Internet EDI, synchronous communication, advanced contract management

IAC: Eight Research Themes & Related Projects *(continued)*

- Managing the End Customer
 - ▶ e-coupons, personalization
 - ▶ e-business intelligence
- Impact of Globalization
 - ▶ conference, security issues for contracts
- Deep Computing for Commerce
 - ▶ personalization, finance, datamining
- System Foundations
 - ▶ business partner framework
 - ▶ commerce platforms

E-Commerce and Related Disciplines



E-Commerce:

Some Research Implications

- **Computing**
 - ▶ E-C applications highlight problems in classic areas and generate new problems
- **Economics**
 - ▶ new opportunities for mechanism analysis and design, and a need to focus on limiting cases
- **Management and Business**
 - ▶ new organization requirements, business opportunities, structural possibilities

Goals of the Conference

- Understanding of different models for E-Commerce education
- Sharing of experience and problems
- Needed resources in a rapidly changing field
- Discussion of critical problems
 - ▶ student overload
 - ▶ research and tenure emphasis
 - ▶ overlapping subfields
 - ▶ is everything "e" ?
- Possible changes in direction

Why Does IBM Care?

- IBM hiring targets overall exceed 30,000 per year into foreseeable future
 - ▶ IBM targets for "e Business Specialists" exceed supply by factor of 10.
- Needs for continuing education in new areas
- Needs to provide education to its customers
- Continuing needs for research collaborations and results