

Business Software Alliance

The Coming Software X Curve

Andy Grove
Chairman of the Board
Intel Corporation
October 9th, 2003

ADVICE BY
ANNIE'S MAILBOX

Dear Annie,

I am a suicide prevention manager at Fort Benning in Georgia. Our soldiers and families face increasing pressures in this modern era. Fortunately, National Depression Screening Day is there to provide a tool for them to recognize and cope with stress, anxiety and sadness.

I am writing because what works for the military also will work for the general public. Having information on the symptoms of depression is an important first step to help ourselves, our families and our friends. I hope all Americans who are feeling stressed, angry, anxious or sad will take advantage of this national outreach.

National Depression Screening Day is Oct. 9, and it can help all Americans take stock of their emotional well-being and access the information, treatment and support services they need. No one needs to suffer in silence. As we tell our soldiers, asking for help is a sign of courage.
Sincerely, -- Yvonne Wilbanks, Alcohol and Drug Control Officer, Suicide Prevention Manager, Fort Benning, Ga.

Dear Yvonne Wilbanks,

Thank you for your letter and for providing us with an opportunity to remind our readers once again about National Depression Screening Day. Depression can strike anyone, at any time. This year, the program also will offer information on parental depression and how to manage stress.

If you haven't been feeling like yourself lately, this one event can help you figure out what is wrong. Here are some symptoms to look for: Feeling consistently moody or sad; being unable to relax or concentrate; alternating between highs and lows; being troubled by unexplained aches and pains; being unable to eat or sleep.

This year, National Depression Screening Day will be held on Oct. 9. Those who call will get the name and location of a screening site, where they will be screened for a range of common emotional situations that often go undiagnosed and misunderstood, including depression, post-traumatic stress disorder, generalized anxiety disorder and manic-depression. As part of the program, attendees will hear an educational presentation, complete a written self-assessment and have the opportunity to talk privately with a mental health professional.

National Depression Screening Day is Oct. 9

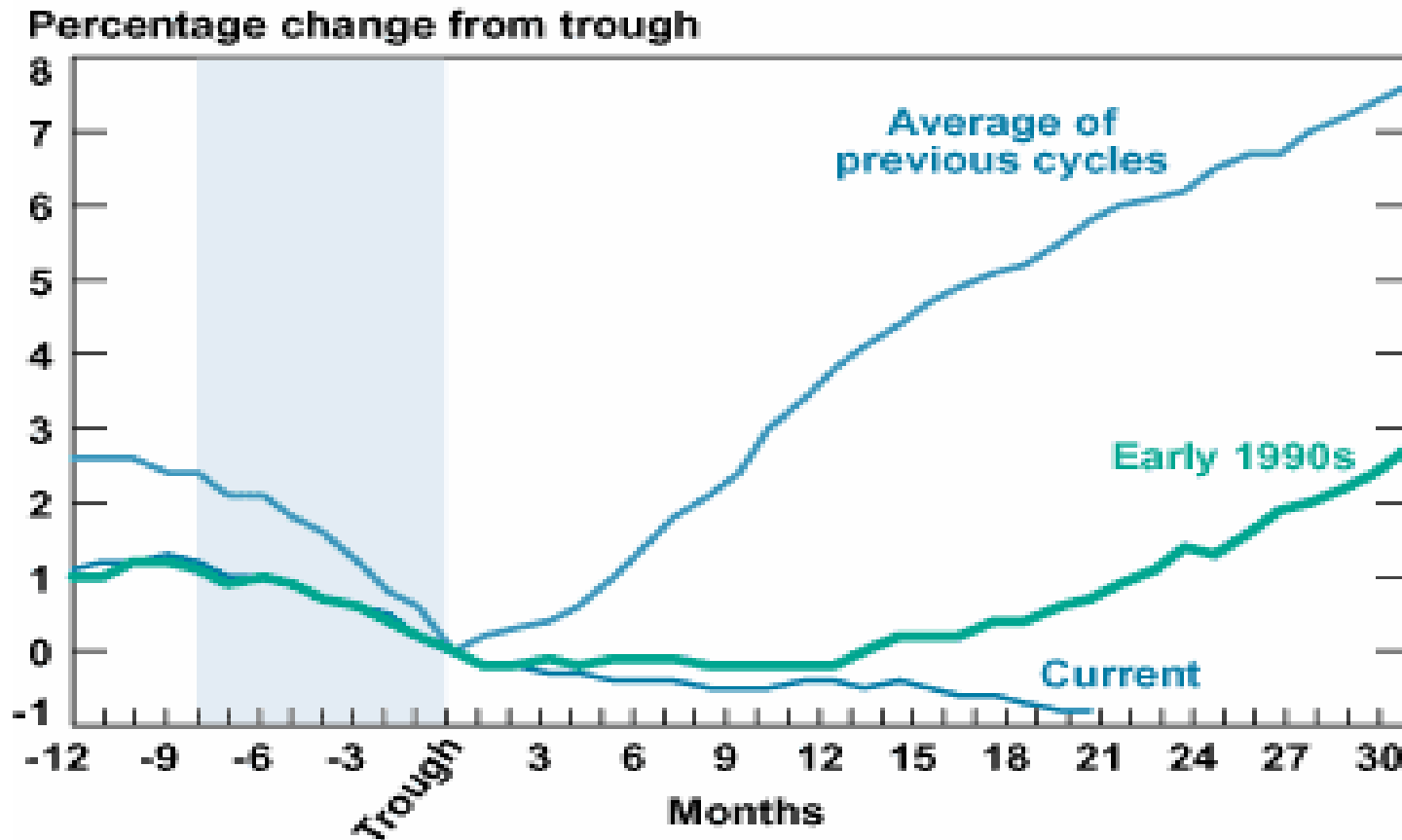
“No one needs to suffer in silence”

Source: Email message, “Annie’s Mailbag” September 18, 2003

**"Over 500,000 US tech
jobs lost in 2 years"**

**American Electronics Industry,
March 2003**

Payroll Job Growth during Recoveries



Sources: *Has Structural Change Contributed to a Jobless Recovery?*

Federal Reserve Bank of New York, August 2003

Note: The shaded area indicates the length of the 2001 recession.

Is this a cyclical
phenomenon or.....?

What about higher
value-added jobs?

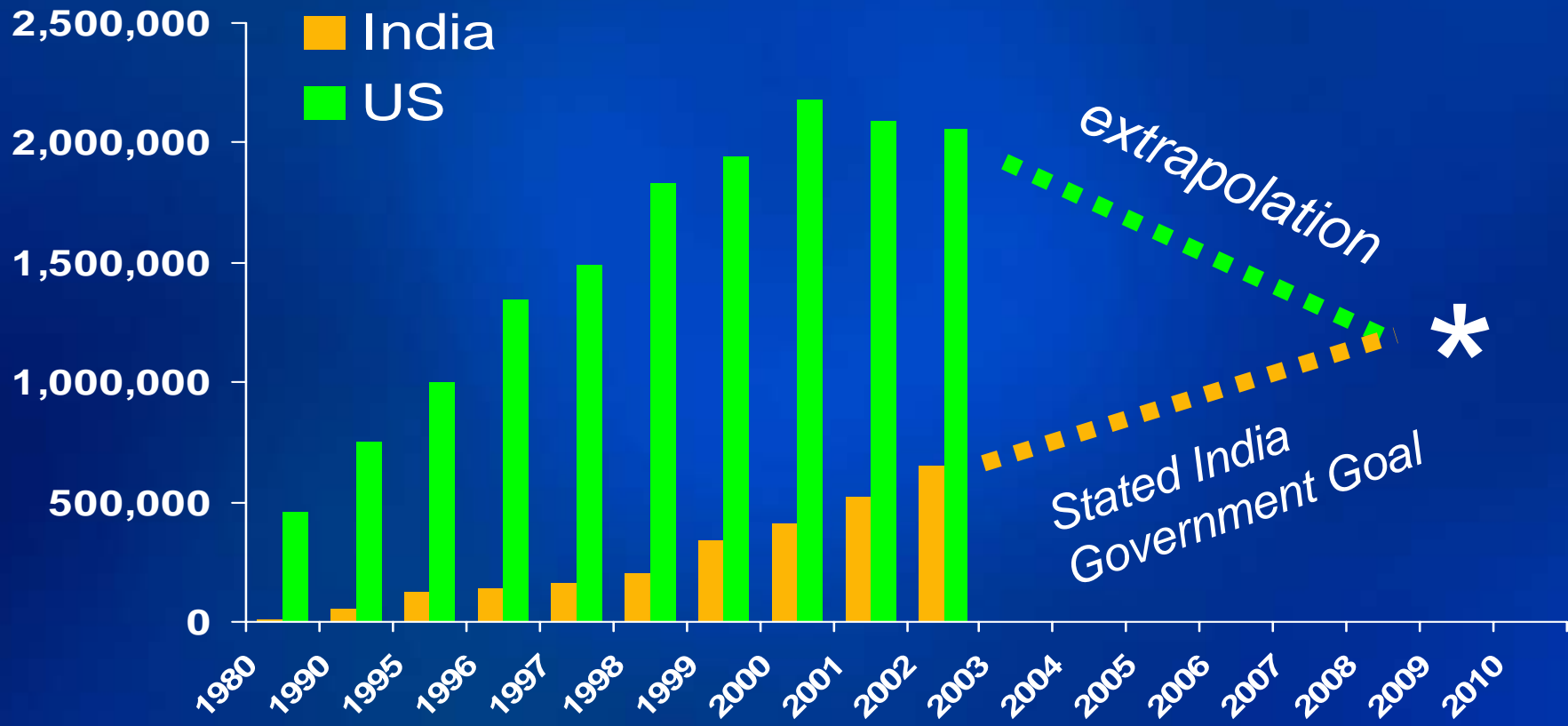
Worldwide Marketshare

Steel : 50% to 10%

Semiconductors : 90% to 50%

Is software & services next?

Software & Service Employees



* *Cross over in 2010?*

Factors

Capacity  **Educational Output**

Cost  **Labor Rates**

Design Productivity  **Virtual Proximity**

Capacity: Educational Output

**US Science and Eng Graduate enrollment
down 5% over the last 10 years**

**>50% of all graduate students are
foreign nationals**

*Source: National Science Foundation
Source: Engineering Workforce Commission*

Cost

Intel Labor Rates

India: \$30k/year

US: \$100k/year

Billing Rates/Hour *

India \$20 – \$40

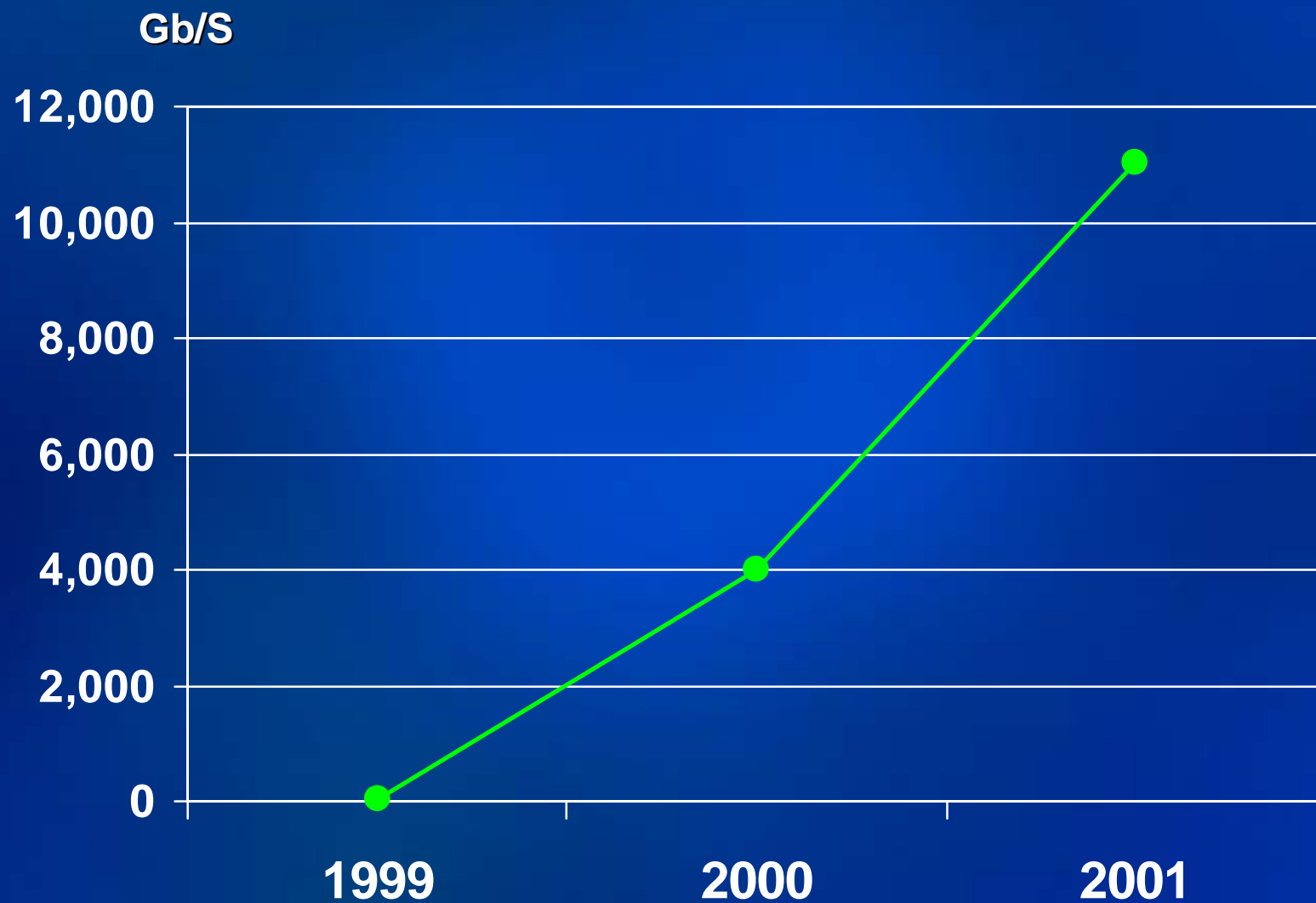
US \$60 – \$120

Design Productivity: Virtual Proximity

Telecom bubble
to the rescue

Engineers in India
got
"on the LAN"

India to US Telecom Capacity



Bandwidth Pricing

\$/MIPS

\$/MB

\$1,000

\$100

\$100

\$10

\$10

\$1

\$1

\$0

1995

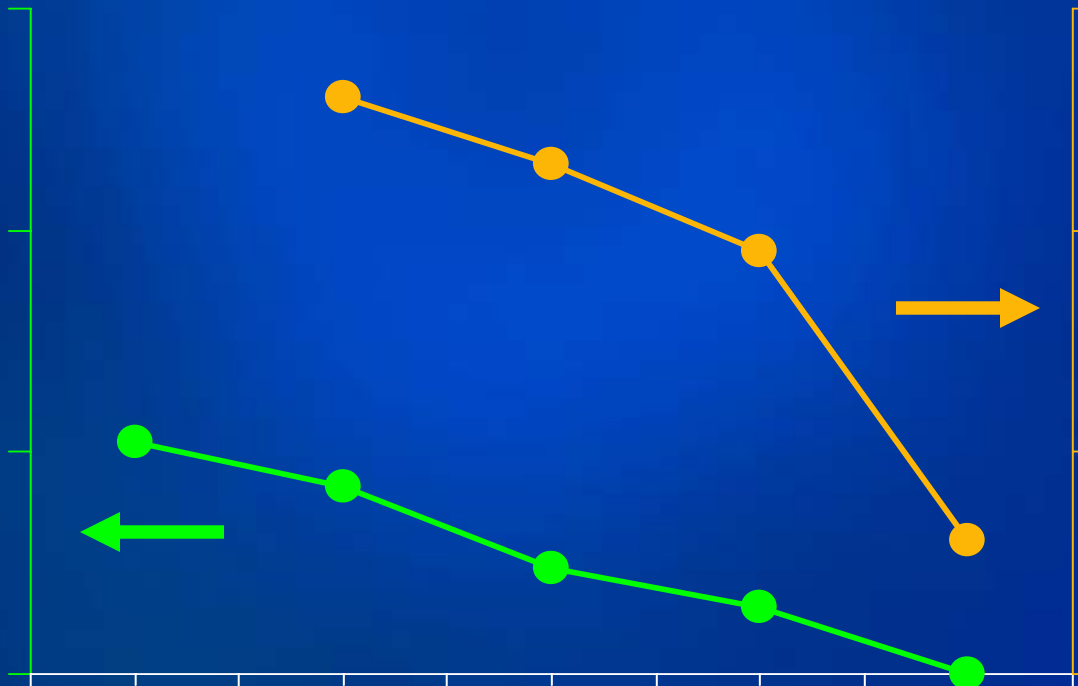
1996

1998

1999

2000

←



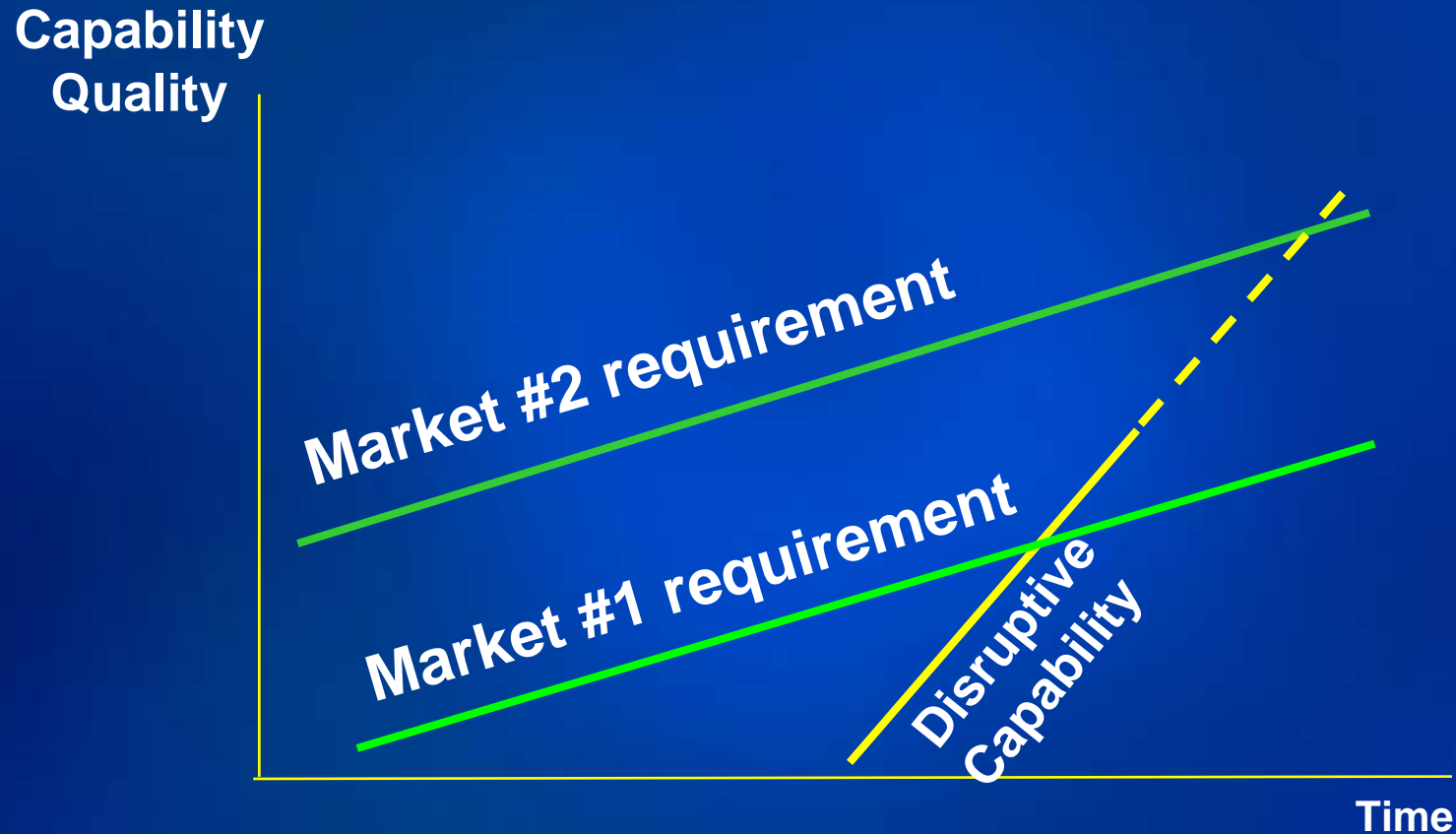
“The bottom 20% of [SW workers] will disappear”

***Ed Yourdon, Director iGate Corp,
an Indian software firm***

– WSJ, October 6, 2003

Disruptive Technologies

C. Christensen



**“Good enough” for some market segment:
gets better and moves up**

Defacto public policy

Science & Engineering Education



K-12 math & science poor

Graduate students: ½ foreign nationals

Academic R&D funding



Down

Infrastructure



Ho hum

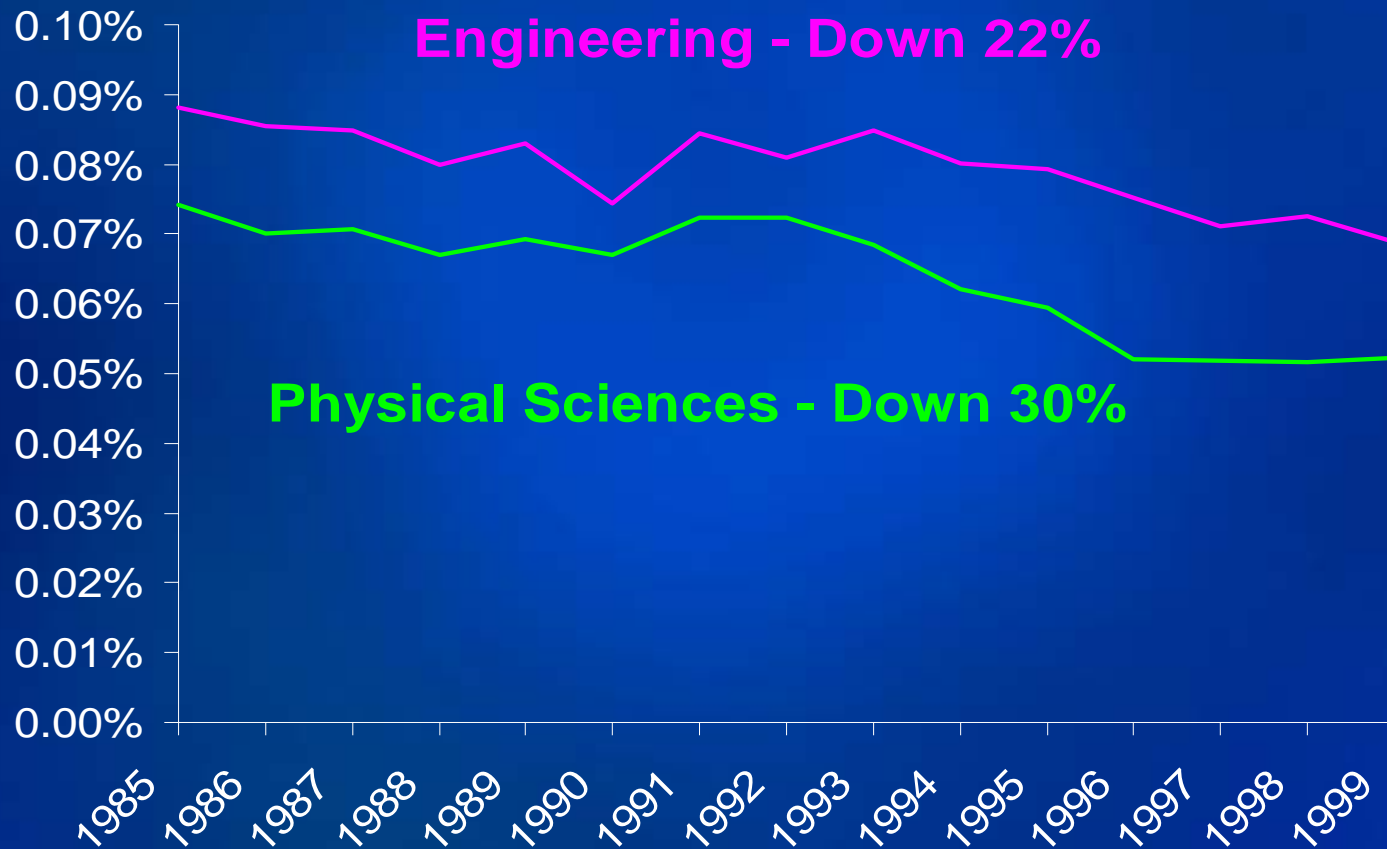
Friction



Growing

Academic R&D Funding

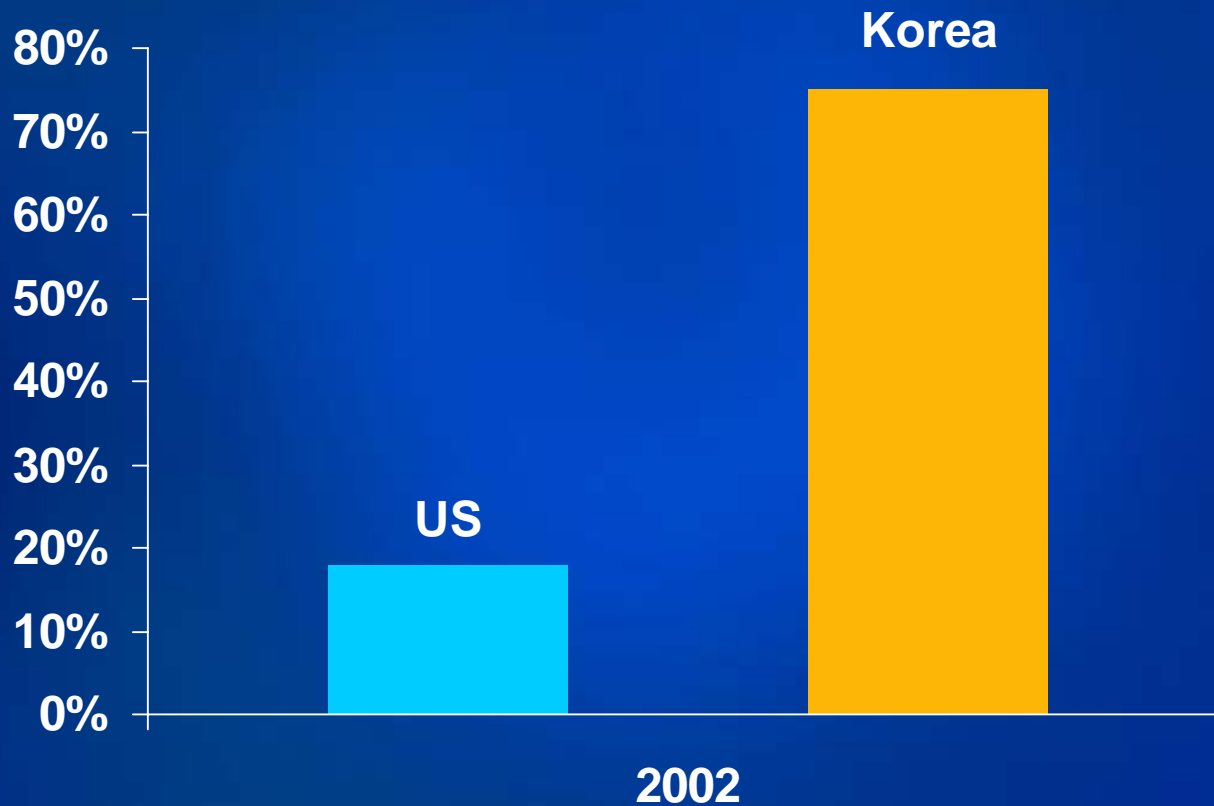
Federal Research Funding as a % of GDP



Source: Stanford University

Infrastructure

Broadband Access % of Households



Source: Business Week, Sept 8, 2003

Friction: Incentives Stated Government Policy

**“...Train or bring into the country
technical and managerial
professionals...**

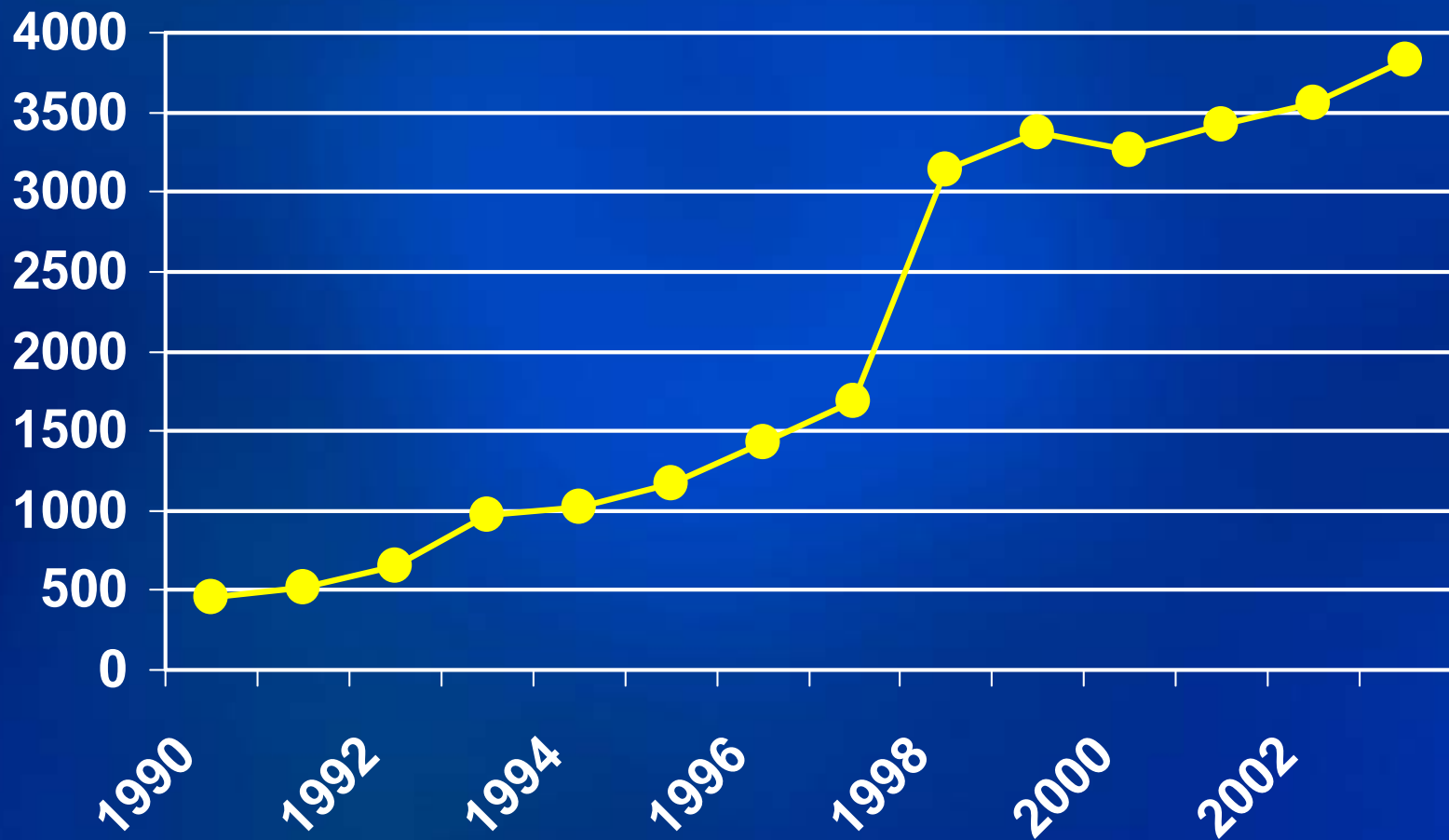
**...introduce bonus and share
options to remuneration...”**

People's Republic of China

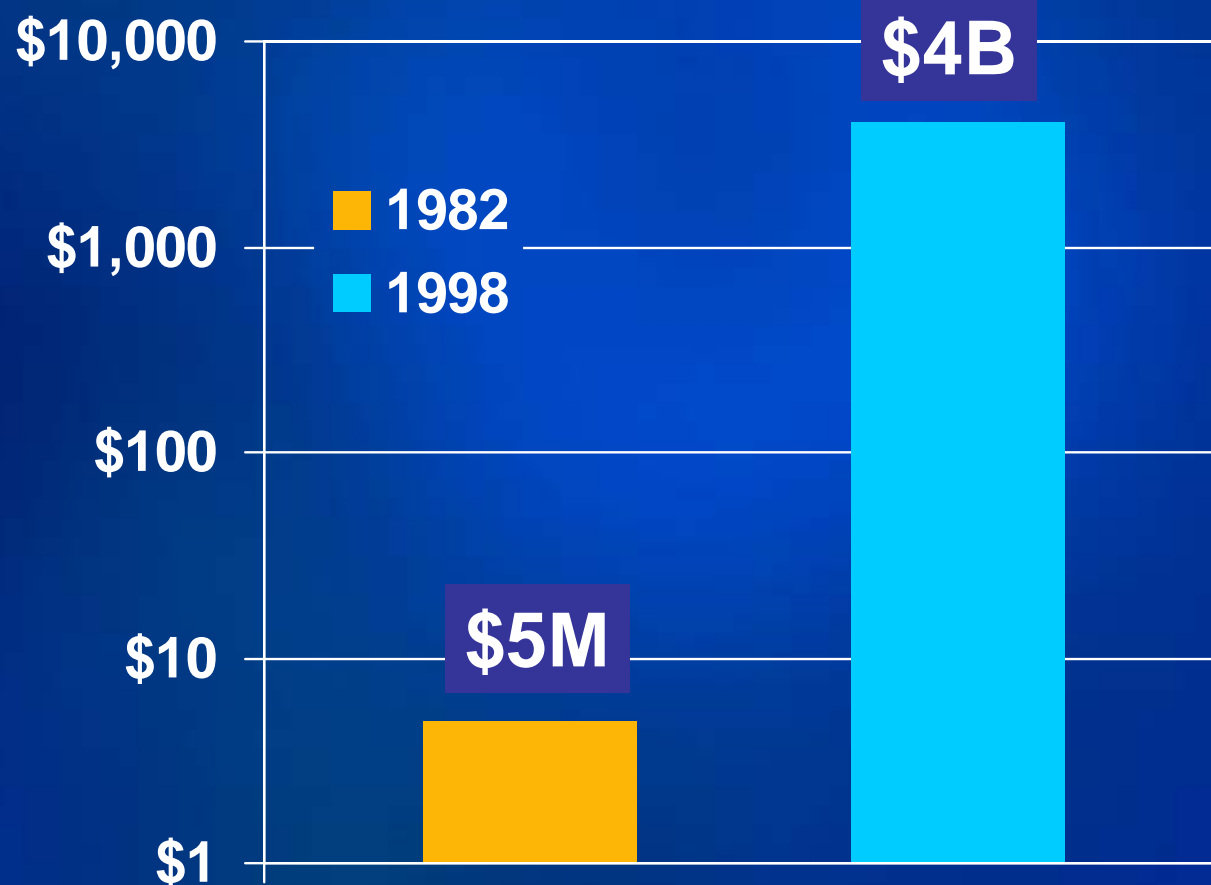
**5 year government plan for the
information industry,**

10th edition June 2001

Friction: Software Patents Issued



Friction: IP Litigation Losses



Source: AON

What Could and Should Be Done?

- **Fight protectionism....abroad and at home**
- **Double US productivity**

How?

Universities

Research on SW/SV technologies

Industry

Collaboration on pre-competitive techniques

Human Resources

Attract the best around the world with incentives & Immigration policy

Friction

Raise the hurdle for IP litigation; strengthen the patent office

Can We Afford It?

Farm: \$30B subsidies

Airline: \$15B loan guarantees

Oil: \$11B subsidies

Steel: \$12B tariffs

**\$1B/year could help us achieve
the goal**

Do we dare take
purposeful action?

Before it is obvious....
and
too late

