A Network of Networks: A Vision for APEC

Goals for this Meeting

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The Asia Pacific Economic Community

- Accomplishments in combating emerging infections
- Challenges that remain
- Networking as a part of our strategy
- Goals of this meeting
APEC Leaders Summit,
October 2001, Beijing
Countdown to Beijing

• 1995 Beijing, 9th ISTWG-EID introduced
• 1997 Singapore, 13th ISTWG EINET, Influenza surveillance
• 1998 Taipei, 14th ISTWG, EID Framework, E Coli.
• 1999 Seattle, 17th ISTWG Enteroviral Watch, Surveillance and Response, GC
• 2000, Brunei, Leaders Meeting-Report Requested
• 2001, Hanoi, 20th ISTWG, Dengue, HIV business forum
Infectious Diseases: A Reason to Act, Acting with Reason

- Rationale for action:
  - Human suffering
  - Trade consequences
  - Economic losses
  - COST EFFECTIVENESS OF RESPONSE

- Acting with reason
  - Complement ongoing global efforts
  - Strategic action areas for economies to pursue
Six Strategic Action Areas

• Electronic networking
• Surveillance
• Outbreak response
• Capacity building
• Partnering across sectors
• Political and economic leadership
Internet Use in APEC Economies 1997

Source: Nua Ltd. and others, 1997, http://www.nua.ie/surveys/how_many_online

THE APEC ECONOMIES

Internet Use
- Red: 4% or less
- Pink: 5-10%
- Lt. blue: 11-19%
- Blue: 20%+
- Yellow: NA
Internet Use in APEC Economies
1999-2001
Source: Nua Ltd. and others, 2001, http://www.nua.ie/surveys/how_many_online
Inter-country Surveillance Network

Agency for Cooperation in International Health (ACIH)

Southern China Surveillance Network (proposed)

APEC

Pacific Public Health Surveillance Network (PPHSN)

Mekong Basin Disease Surveillance (MBDS)

ASEAN

Global Outbreak Alert Network

WPRO-SEARO Collaboration
APEC Emerging Infections Network: Project Overview

Activities:
- Listserv
- Technical Assistance
- Surveillance
- Teaching
Website Monitoring.1999

- Use of multiple software packages to analyze server statistics
- Documented response to introduction of new distance learning materials
- Documented geographic breadth of response.
VISITS TO APEC/INFECTIONOUS TEACHING AND LIBRARY PAGES
‘Love bug’ hits with a vengeance

State: ‘Most agencies still in triage mode,’ after up to 10,000 of its PCs infected by virus

Seattle Post-Intelligencer

‘Love bug’ smites world’s computers

E-mail systems shut down

NYTimes.com

The New York Times

May 5, 2000

A Rogue Software Program Attacks Computers Worldwide

By JOHN MARKOFF

A rogue software program, borne by an e-mail message proclaiming "I love you," propelled itself around the world yesterday, jamming and crashing e-mail systems and destroying data on hundreds of thousands of computers.

To defend themselves, thousands of corporations unhooked their computer systems from the Internet and began a laborious process of purging the program internally.

Underscoring how interconnected the world's personal computers have become, the program also made its impact felt in government agencies including the White House, the Pentagon, Congress and the British House of Commons.

At Ford Motor, one of the corporations hit...
International Trade and Agricultural Products

[Graph showing trends in international trade and agricultural products over the years, with different data series indicated by different markers and lines.]
Air Passenger traffic to/from and within Asia/Pacific region

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Passengers (millions)</th>
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<tbody>
<tr>
<td>1985</td>
<td>100</td>
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<tr>
<td>1990</td>
<td>200</td>
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<tr>
<td>1999</td>
<td>300</td>
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<td>2004</td>
<td>450</td>
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<tr>
<td>2009</td>
<td>600</td>
</tr>
<tr>
<td>2014</td>
<td>850</td>
</tr>
</tbody>
</table>

- **INT’L**
- **DOM**
Top Asia/Pacific countries in terms of projected growth for 1999-2014 period

- Vietnam
- China
- Hong Kong SAR, China
- Indonesia
- Singapore
- India
- Philippines
- Thailand
- Korea (Rep. of)
- Malaysia

Average annual growth 1999-2014
Human Disease as Travelers on the Global Express
“Trade-Related Infection” an infectious disease whose:

- Emergence is hastened by ecological pressure of “scaling up” production to meet international trade markets
- Transmission is broadened through transportation or trade in goods
- Economic impact is large in terms of trade disruption
HIV/AIDS

- Global travel facilitated introduction
- Increased population/urbanization facilitated transmission
- Technology of clotting factor production, shipping facilitated introduction, Technology of blood transfusion facilitated transmission
- Overlay of global epidemic on uneven resource base enhanced mortality in poor regions.
BSE/nCJD Disease

- Major contributor to disruption of beef trade
- Change in husbandry practice implicated
- Novel agent, long latency
UK Beef Exports
1970 - 1999

Food and Agriculture Organization of the United Nations, FAOSTAT
BSE/ New Variant Jacob Creutzfeldt

- Region has had imported CJD (not new variant) human disease, clusters related to pooled source surgical grafts in 1997 seen in two economies.
- In 2001 first case of BSE in cattle reported from an APEC economy
BSE/nvCJD How can networking help?

- New agent, new biology, new pathophysiology
- New diagnostics under development
- Current clinical/laboratory recognition
- Epidemiologic investigation

- Information exchange, access to reference material, distance learning
- Insure earliest access
- Real-time lab/bedside consultation
- Localize clusters, prevent spread through trade
APEC: A Network of Networks To Combat Emerging Infections

We Can Work Together To Make It Happen

Washington DC, 9/01