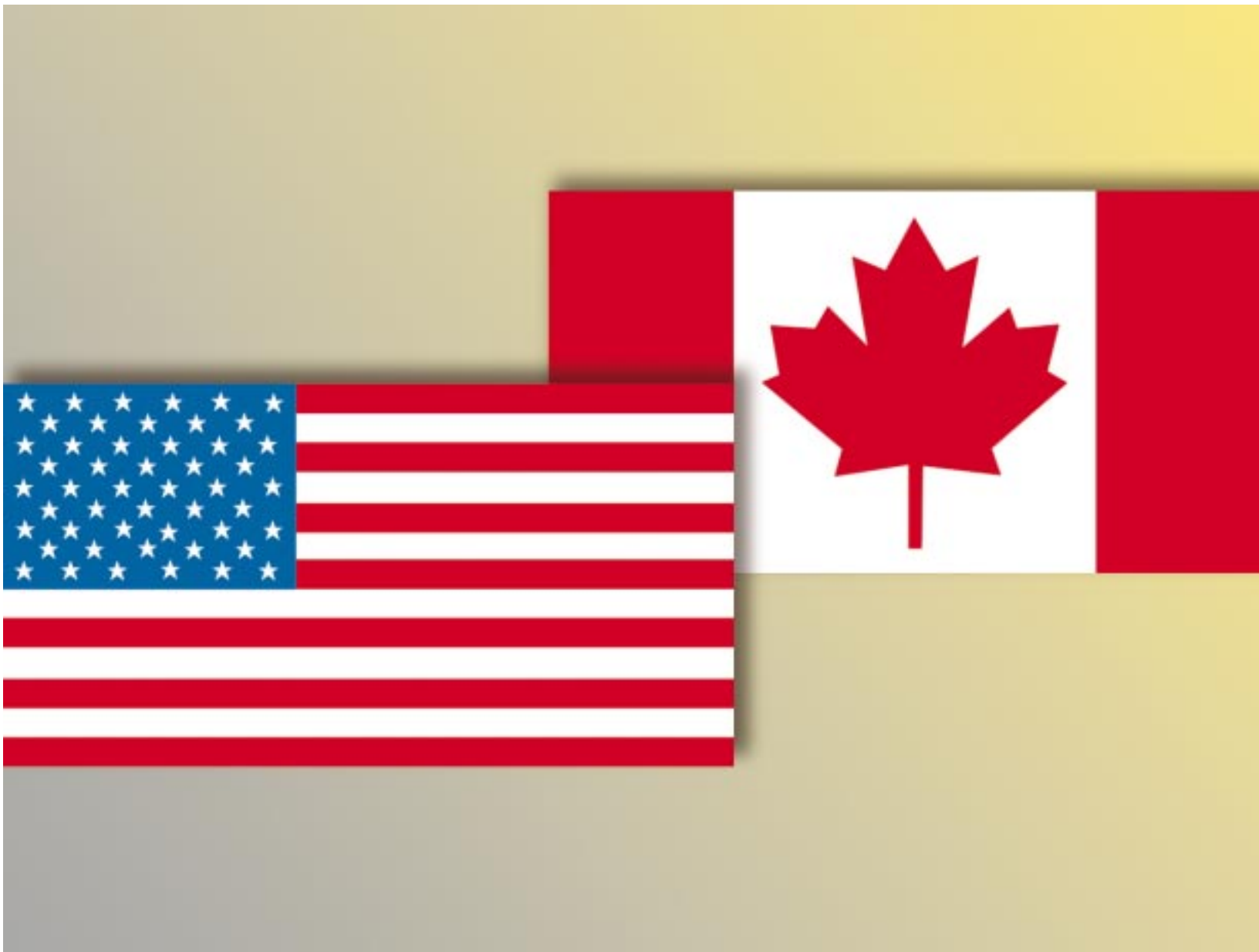




The Digital Economy and North American Economic Growth

A U.S.-Canadian Dialogue on the
Internet's Impact on Competition,
Innovation, and Opportunity



A Policy Forum by the Committee for Economic Development
and the Canadian E-Business Opportunities Roundtable

THE DIGITAL ECONOMY AND NORTH AMERICAN ECONOMIC GROWTH

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Canadian E-Business Opportunities
Roundtable

May 16, 2001

The spread of digital network technologies, the Internet in particular, is rapidly transforming commercial relationships and economic opportunities. Faster and easier exchange of global information should intensify competition, foster market economies, expand choice and opportunity, improve productivity, and raise global education levels and living standards.

Canada, the United States, and other nations must facilitate the deployment and acceptance of these network technologies in order to reap the substantial gains they offer. This cross-border dialogue focuses on key e-commerce policy issues that will shape the future not only for the digital economy, but for virtually all forms of economic activity.

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OPENING REMARKS

CHARLES KOLB:

The Committee for Economic Development (CED) is an organization of U.S. business leaders and educators. For nearly 60 years, CED has been a vehicle for American business to have a voice in shaping public policy on issues ranging from education to the management of government to international trade. In spite of the vagaries of the financial markets, it is clear that the spread of digital network technologies is transforming the way people around the world work and live.

CED explored a number of the issues related to the effects of public policy on the new economy in our 2001 policy statement *The Digital Economy: Promoting Competition, Innovation, and Opportunity*. This statement focuses specifically on four key areas of public policy that have been roiled by technological and commercial developments: competition, privacy and security, intellectual property, and the gap in access and use related to skills and income.

Globally, while Canada and the United States each face unique challenges, we are also each wrestling with some of the same issues of competition, privacy and security, intellectual property, and the gap in skills and income.

This Forum is an effort to focus on the important role of business in shaping the policies that will drive e-commerce in the coming years in both our countries. We are pleased to be working with the Canadian E-Business Opportunities Roundtable on this effort. We are especially grateful to CED's former Chairman Edmund B. Fitzgerald, Managing Director of Woodmont Associates and former Chairman and CEO of Northern Telecom, and to Nortel Networks for bringing our two organizations together.

DAVID PECAUT:

The Canadian E-Business Opportunities Roundtable has brought together leaders from across the private sector to shape a new vision for Canada's Internet economy, to help navigate the unpredictable waters of the new economy and to create a climate in which e-business can thrive. The Roundtable has worked closely with key stakeholders, and with a fed-

eral government that was open and receptive to new directions. For this reason, the Roundtable has succeeded in achieving many of its goals.

In this new networked economy there is a pressing need for this kind of ongoing and open collaboration and cooperation — between the public and private sectors, and between nations — if we are to reap the full promise of the information society: better business and governance, prosperity and opportunities for all.

We would like to extend our thanks to CED for hosting this valuable cross-border dialogue on the Internet economy. The sharing of ideas and experiences has benefited all participants and will, we hope, inspire further discussion and learning by policymakers and business leaders in both nations.

EDMUND FITZGERALD:

I am a Trustee and former Chairman of the Committee for Economic Development, and the retired chairman and CEO of Northern Telecom Ltd., the predecessor company to Nortel Networks.

Today's dialogue is on a subject of great importance to both the United States and Canada. As a member of the subcommittee that produced

CED's recent statement, *The Digital Economy: Promoting Competition, Innovation, and Opportunity*, I want to offer a brief observation:

The spread of digital network technologies is creating beneficial changes in commercial, economic, and social spheres. What we have witnessed over the past year or so, with the deflation of the dot-com bubble, is that having the technology is not enough. While the Internet and other technologies hold great promise, they must be accompanied on the business side by business models that actually yield profits and on the government side by policies that accommodate growth.

Our keynote speaker this afternoon is the Honourable Brian Tobin, Canada's Minister of Industry. In a recent address Minister Tobin called Canada a smart country connected to the future. That is a very good description. Together, Canada and the United States are the world's largest generator of e-commerce revenues. Separately and together, we are two smart countries connected to the future.

It gives me great pleasure to present to you Minister Brian Tobin.

KEYNOTE ADDRESS

MINISTER TOBIN:

Over the past 21 years as a politician I have noticed an incredible change — a revolution in Canada. Canada has become far more entrepreneurial. It is a country that has seized the opportunities to play, to compete, to participate in the global economy.

We have all seen in recent months the marketplace turbulence in the IT sector. While this market turbulence is disconcerting, I want to tell you that in the context of Canada it does not dissuade us one iota from a fundamental belief in the Internet and a fundamental belief in the need to participate and to invest in the opportunities associated with the new economy.

The global economy has not eliminated the business cycle, nor can it, and no country is immune. Certainly we are not in Canada. But the up side is that Canada is grounded by strong economic fundamentals, by budget surpluses, by low inflation, low unemployment, meaningful tax cuts, and, I believe, forward-looking policies. It means that Canada has taken measures

over the last decade that leave us well-positioned to withstand market shocks.

Canada has gone from having a historically high deficit of \$42 billion annually to our largest surplus ever this past year. In fact, yesterday the Prime Minister of Canada announced that Canada will pay down \$15 billion of debt this year.

Canada was the first member of the G7 to balance its books. The Canadian economy recorded its 22nd quarter of consecutive growth in the final quarter of 2000, marking the longest uninterrupted string of quarterly growth since the mid 1960s. Real GDP growth was double the U.S. growth over the second half of 2000. Our debt-to-GDP ratio has fallen to 54 percent, and we expect it to fall even lower, to 40 percent, within five years.

We are poised to dispel the great Canadian myth about taxation. We are no longer a high-tax environment. The fact is that early in 2001 we put in place the biggest tax cut in our country's history, a package worth about \$65 billion US, over five years. I think this is a huge amount for a country one-tenth the size of the United States.

I referred to Canada's major business advantages and how they position Canada to seize the opportunities in the knowledge-based economy. Our advantages, for starters, are that we possess the best work force in the world, highly skilled, competitively

priced, entrepreneurial, and dedicated to quality. The 2000 Global Competitive Report ranked Canada number one in the world for per capita availability of knowledge workers, number one out of 59 countries surveyed.

We have the highest percentage of population online of any country in the world. We have committed to ensuring that every single community in Canada, and every Canadian, has access to high-speed broadband by 2004. Indeed, we have the highest penetration of high-speed broadband of any nation in the world today. We have about two times the penetration for high-speed broadband than that which is available today in the United States.

The point I am making is that “innovation” is not a new word for Canadians. We have always depended on our wits with a small population in a large geography. We have parlayed what could have been a disadvantage into a telecommunications and transportation advantage.

The role of government in Canada has changed dramatically. Our government used to own the country’s largest airline, the largest railway. We used to own the Canadian Oil & Gas Company. Air Canada, Canadian National, and Petro Canada have all been privatized. And countless other small and large government-owned operations, both federal and provincial, have also gone to the private sector.

Nowadays, the government picks its spots; it acts as a catalyst, facilitator and a cooperative partner. The government listens, and consults closely with the private sector to develop a favorable environment for e-business growth and investment. When we act, we act to strengthen this environment, as we did last year with legislation to protect online privacy and to allow the use of digital signatures and records.

We are also investing heavily and we are investing strategically in basic and applied research. In March, the government announced that it will invest an additional \$700 million Canadian into the Canada Foundation for Innovation. This organization provides funds to universities, to colleges, to research hospitals, and not-for-profit organizations, so that their infrastructure can support cutting-edge research. That brings our total investment in that organization to \$3.15 billion since 1997.

We are also establishing 2,000 new research chairs at Canadian universities. I want to put that in context. Prior to the announcement of that program at a cost of another billion dollars, we had just 167 chairs in place at universities across Canada. We are adding 400 a year every year for the next five years.

By offering attractive R&D tax credits, the government is helping to turn Canada into a global hub for a

growing list of leading-edge companies. Ericsson, IBM, Cisco, Nortel, and Nokia all have announced in the last year that they are planning new global business centers to be located in Canada.

Through the tax system, we are creating a business-friendly climate in Canada. Here's how. We have lowered the Canadian capital gains tax rate so that it is now lower than that offered in the United States. We now offer generous and flexible treatment of stock options, more competitive than that offered in the United States. By 2005, on a legislated schedule, the average corporate tax rate in Canada will fall to roughly five percentage points below what is available here.

Just last week Canada received an important international endorsement for its e-business performance. The prestigious *Economist* Intelligence Unit published its worldwide e-business ratings. In the survey of the world's 60 largest economies, Canada moved up three notches, to fourth place. The survey placed the U.S. in the top spot as the most e-ready country in the world.

One of the group's more interesting findings was that business agility and smart policy trumped size and wealth. Canadian businesses have demonstrated that they are as agile as anyone, and I believe the record shows that Canada has implemented smart

policies so that the private sector can flourish.

Again, relying on industry's expertise, the government has been a partner with the Canadian E-Business Opportunities Roundtable as it delivers its call to action to Canadian companies to pursue their business opportunities online. I want to take this opportunity to salute the work of that Roundtable.

The mix of Canadian talent, innovation, and entrepreneurial drive in partnership has already produced impressive results. Did you know, for example, that there are more biomed-biotech workers in greater Toronto than anywhere in North America, including the Boston area? Did you know that the Montreal high-tech cluster ranks first in North America for biopharmaceutical research, that Canada's telecom clusters now export more telecommunications equipment to the U.S. than we import?

We are especially proud of our one product sporting the "Made in Canada" brand that is getting, quite frankly, rave reviews worldwide. The breakthrough BlackBerry, which you can clip onto a belt, allows the user to send and receive wireless e-mail, an invaluable device developed by Research in Motion (RIM) of Waterloo, Ontario.

One sign of this culture of innovation is the vibrant and growing venture capital community in Canada. Over the

last five years Canada's venture capital industry has expanded to record levels of investment activity. The amount of capital disbursed grew to a record level of \$6.3 billion, reflecting a 133 percent increase over the \$2.7 billion in 1999.

Canada and the U.S. do a tremendous amount of business together, about \$1 billion U.S. each and every day in cross-border trade. That is roughly double the business that the United States does with Japan. So I would say to you we have got a close and friendly relationship. It's one that we almost take for granted.

What I really wanted to say to you is Canada has changed. We are competitive. We are focused. We are ambitious. We are not interested in following the pack or being part of the pack. We want to lead the pack. We look in terms of measuring our own success and competitiveness directly south, and we see the most productive and competitive economy in the world. We are at your heels. We are nipping. And before too long we are going to invite you to follow.

PANEL 1

The Role of the Internet in Raising Economic Growth

IRWIN DORROS:

We have four panelists for this discussion on the role of the Internet in raising economic growth. Leonard Brody is CEO and Chairman of ipreo, an online private equity simulation and research firm, and he is a Director of Onvia Canada in Vancouver. A CED Trustee, Don Peterson is the President and CEO of Avaya. Tom Weber writes the E-World column every Monday for *The Wall Street Journal*. John Wetmore is Vice President of ibm.com, IBM Americas.

LEONARD BRODY:

What I want to present to you today are two key propositions regarding the importance of startup companies. The first proposition is that the health of a nation's economy will rely on the vitality of its startup community and that, contrary to popular opinion, new economy companies, in particular Internet startups, will continue to

dominate growth cycles. Secondly, we are in the beginning of a new Net World Order and we are going to see it develop in the next five years at an unprecedented rate. In light of this, the new world of entrepreneurialism and innovation will be truly borderless.

Let's talk about the first concept, about a nation's economy relying on the health of its startups. That point is no more dramatically made than in the areas of job creation and employment. We know that the startup community accounts for approximately 80 percent of North American job creation. We also know that, today, approximately 80 percent of North American companies have fewer than five employees. In addition, the startup community is actually the fastest growing group of exporters in the United States.

In the areas of research and development, startups have often pushed large companies to innovate their product and model cycles at an unprecedented pace. According to Hewlett Packard, their average product life is now six to 12 months, whereas five years ago it was three to five years. Cisco has consistently relied on the innovation of startups and their intellectual property. Over the course of the last seven years, Cisco has purchased over 70 complementary technology companies.

Take a look at corporate venture

capital. It is still rising at a dramatic rate even with the market correction. In 1994, four percent of total venture capital funding came from corporate venture capitalists, today, that number is 18 percent.

Startups are incredibly important in defining workforce culture adjustments. Arguably, startups generally reflect people's perceptions of work and work life a lot more accurately than large corporations do. Nortel is a great example of a company that has been implementing this quite effectively. Nortel is now seeing approximately 20 percent of its workforce telecommute.

There has been a lot of discussion about whether Internet companies will continue to get funding and will continue to be an area of growth in the venture capital community. Since January 1, 2001, Internet-related deals are still the number one sector for private funding, and to date, there are 362 deals completed totaling \$4.6 billion U.S.

With respect to the second proposition regarding a new Net World Order, it's clear that now in the post-tech bubble the Net economy is growing and continually globalizing, but it is actually not that worldly just yet. We are now noticing very specific trends. Companies are now showing a preference to buy technology products and services locally. Regardless of where

the back end is, they are continuously looking for a front face that is in their backyard. This is both for cost and comfort reasons.

I would argue that the only truly global economy today is that of ideas and knowledge; entrepreneurialism and innovation are now without borders. Knowledge workers still tend to initially cluster around areas of high growth: Silicon Valley, Silicon Alley, etc. But we know that those knowledge workers are consistently planning on moving. Of the 25,000 Canadians that were recently surveyed who work in the tech economy in the United States, 84 percent plan to return home in the near future. We also see a sharp rise in the mature free agent economy. That number has tripled from \$8.2 million in 1999 to \$25 million today.

Startups also play a large role in international relations. In particular Internet-related and technology startups, have actually fueled unexpected tiger economies in countries like Israel, India, and Vietnam. We know that tiger political leaders are now, in light of their quick economic growth, put into a situation where they have to balance economic interests against geopolitical conflict. *Red Herring* recently reported on this when Ariel Sharon, after first taking office, decided to meet with leaders in the technical community from outside the country before he chose to meet with

President Bush. This clearly demonstrated the importance that economic interests plays in Israel's, and soon other nations, foreign policy.

As a final note, the new economy has been sculpted by entrepreneurs worldwide, not just in North America. Many of the new economy models that you hear about today were actually developed outside the United States. For example, instant messaging, which is a real area of high growth, was actually developed by ICQ Mirabilis in Israel. Peer-to-peer software, which many people mistakenly attribute to Napster, was actually developed by a teenager in England named Ian Clark.

It is important to remember that every company represented in this room today, both large and small, started with two people in a garage.

DONALD K. PETERSON:

Avaya is a recent spinoff from the Bell technology companies. We were under Lucent, and before that AT&T, Western Electric, and so forth. It is a large company with about one million customers and seven to eight billion dollars of revenue. I am going to reflect on our experience in addressing those market areas and the Internets impact on enterprises, as I see it anyway, in the national and global scenes.

In terms of the individual enterprise, there are important things going on. The convergence of communications is something that I think all of us now accept as happening, but it means more than the Internet. I would submit the Internet has now moved into something more than IP-based communication. It is, rather, convergence of all networks of all types to be used as effectively as possible for whatever purpose the enterprise has. That means the telephone networks and the enterprise networks, the mobile networks, the landline networks, the satellite networks; they all form a network. It is the application of all of those things together that is changing so much.

The customer is at the center of that, not technology. You start to think through the opportunity in the network to enable your employees to connect you with your customers, to change your value. You reach out and bring in your suppliers. You then find that you have whole new ways to do things. All of that friction, all of that cost at the interface that fundamentally took information from here and brought it over there, those costs go away, and the information just flows.

That enabling changes the way people conceive of businesses. You all know the many examples, like Dell and others who have already chopped through this. Those of us with organi-

zations moving forward are going to be challenged by that over and over again.

Internal efficiencies. We have seen the ad where Oracle says that it saved a billion dollars. Cisco has saved tremendous amounts of money in applying these Internet technologies themselves. I have saved \$100 million in Avaya in one quarter. It is enabled by communications, because the cost structures in business have most to do with handling information.

When you take out those interfaces, you enable employees, because they can see through to what you are trying to do, and the customer can see back into the organization to whom they have to influence to get the right product, to make sure the service is there on time.

The fact that the bubble has burst is an interesting market phenomenon, maybe a painful market phenomenon for most of us, but it is not going to change the progress of the Internet in changing business. This is something we have started and probably won't finish in my lifetime.

At the national level, once you start this kind of change, there has to be change in the economy. And there absolutely is. Old industries dry up because old industries struggle with these changes. They no longer are effective. They can't get those costs out soon enough. A new industry comes

along, a new company comes along, solves that problem never having put those costs in, they have a better value proposition, and they get your customers.

Higher productivity growth is the order of the day when these things are applied. We have all seen the statistics. CED has published them. The productivity improvements in the U.S. economy doubled in the second half of the '90s from the first half of the '90s, and they have been at a relatively low level actually for the last I believe 15 or 20 years. There is more to come. I know it has slowed down right now, but the economy is going through one of the downward cycles that weren't supposed to happen, but of course will continue to happen.

Nonetheless, we will come out of this, and the value of communications in enabling productivity through communications is only beginning. I have seen estimates by some people that there is less than five percent penetration of these new communication technologies into the business processes in the United States. So there is a tremendous amount to do. And as more and more people become capable of grappling with these technologies, that will only accelerate.

Distance has no meaning. As the telephone companies have found out, you can't bill on it anymore. But those of us in other areas of business, can

communicate with anyone in real time, anywhere, period.

That means you can take your business to areas of the country with low employment, you can take your activity to areas that have greater concentrations of skills. You can design your products in New Jersey, as we do. You can make them in Canada with Selestica, as we do. You can also make at the same time components of the same thing in Mexico. That is going to develop or let us increasingly utilize the resources not only of the country, of course, but the world as we go forward.

On the global level, the impact of this is going to be perhaps even more profound, because there are, obviously, many more boundaries between countries than there are between regions of a single country. Once the information flows, I think we have yet to decide, yet to define, what boundaries mean going forward.

You can't keep information out of your country anymore just because you don't like it. You can't keep your citizens from interacting with other citizens anymore. And if you want development in your country, which I would assert essentially every single country around the world wants, you actually have to open and facilitate that communication, because it is too easy for people to go elsewhere.

Having said that, if you do that, even the poorest countries can participate in very exciting ways and create huge opportunities for their people. India is probably, in my view, one of the most difficult countries to do business with in terms of selling into that population. Everybody in the electronics business has got to consider, and many of us use, India as a source of the development at the heart of our software products. They started by exporting their people. They have now imported the business.

It wasn't facilitated because the country moved forward in some aggressive way. It was facilitated by entrepreneurs who knew they could communicate this way and create a new business.

Of course, as that happens, the digital divide as we see it across the globe, the equivalent of the one that exists between classes in countries, starts to break down. It is my belief that this is the only way, in fact, that we are going to effectively deal with this division of wealth that is wildly disproportionate in the world today. So I remain very optimistic about the capability of communication of the Internet. However, you want to define it to change the way we all do business and perhaps the way we all live.

TOM WEBER:

I'm an Internet optimist. As they say, admitting you have a problem is the first step. I can see I'm in good company today.

I have gotten a little bit of a different perspective in writing a column for the past couple of years for the *Wall Street Journal* about a lot of this. I went through a very surreal period where every week I would write about the latest consumer dot-com, and it was always something like we will pay you to look at ads, you can have your airline tickets priced randomly, you can travel to a random destination, that sort of thing.

That was a lot of fun for a while, but lately I have been finding it much more rewarding to write about the Internet. One little example I want to give you is from a story I wrote a couple of weeks ago.

I found myself in Kansas City walking around the electric utility substation with a couple of engineers from Kansas City Power & Light (KCPL). They were in the process of installing some equipment in the power substation to let them monitor the usage of the transformers and that sort of thing.

They have always had emergency alarms in there, but they are wiring this equipment up to the web so that their maintenance people can get daily reports on which machines have been

running closest to 100 percent capacity. Then they are going to perform maintenance on those machines first. These hulking transformers cost millions of dollars, so keeping them running is a pretty good thing for a company like KCPL.

I was just struck by the thousands of ways that companies are learning to put digital technology and communications technology to work. That's something that the end users of their electricity probably won't ever notice, hopefully won't ever notice, because they are using it as a tool and not a business method.

One thing for our discussion today I would like to throw out there is all of those opportunities, the ones that we are starting to see emerge and which I really think are the long-term potential for economic growth, and the ones we haven't even invented yet, really depend on having cheap, reliable access to the network infrastructure.

We have been very fortunate so far with the growth of the Internet and the kind of competition that we have seen. The further we move into broadband, I think the more we are going to understand how important it is going to be for all of us to have the same kind of growth there and make sure they, like my friends at KCPL, have a network they can plug into when they figure out something important to do with it.

JOHN WETMORE:

I have two perspectives. My title is vice president of ibm.com, IBM Americas, but that is quite recent. Up until about three weeks ago I was the President of IBM Canada. So I have had the opportunity to work with businesses from the very smallest in Canada to the very largest, and I have had a chance to see first-hand the changes that Mr. Tobin talked about in the Canadian economy in terms of focus, in terms of what Canadian businesses are doing.

There is lots of talk about the dot-com bubble bursting. But the fact is we are in the midst of a revolution of virtually every enterprise in the world that is taking place over five to 10 years, and it is moving from the industrial era into this network era or this knowledge-based era or whatever you want to call it.

The fact is that these investments are being made in every major economy in the world. This isn't a bubble. It isn't going away. In order for companies to stay competitive, they have to make the investment.

The focus of the Canadian Business Roundtable is to look at ways to get Canadian small businesses moving a little more aggressively relative to their competitive colleagues in the U.S. Small businesses in Canada tell us that in some cases they need more

information and more education. There are lots of issues around how do I make the investments and how do I justify the investments in terms of e-procurement or in terms of an e-business application.

There is certainly an issue around resources. Many of them say there's nobody on my executive team who really understands how to apply this technology. And there are still some issues around security and privacy.

What are we doing about it? We are trying to focus in through the associations in Canada, focus in on trying to get over the obstacles of the investments, providing information on return on investment, providing examples, providing references, providing how-to guides as they apply to industry. Industry Canada is in the process of developing a new business website, or portal, that will point small businesses to places to get solutions.

We believe very strongly that there is a tremendous pull-through in the economy from larger businesses, particularly the procurement area. We have had a focus on, again, the larger enterprises both in the private sector and the public sector in Canada going online with their supply chains. In the case of IBM, over 95 percent of our spending is online today, and that's with companies with one entrepreneur who may be in that company and large

enterprises as well. We think that has a strong pull-through impact on our economy.

We have a great idea to get students out helping small businesses through some education in summer programs, and so on. It is something we call E-Corps. And Industry Canada is going to help. It is really an expansion of a program we have called Student Connections. We think it is a real win-win in terms of the students, education, small businesses, and the Canadian economy.

Finally, we think it is really important that we get the buy-in from the grassroots level so these industry associations understand it, and work towards getting their members moving. I am quite optimistic. I feel that we are seeing some catch-up already in small business in Canada relative to the U.S. We have lots of role models and lots of examples, and it is really helping our economy.

QUESTION: *We haven't broken out the difference between business-to-business applications and consumer applications. Certainly in the consumer application area we have a major stall on getting high-speed connectivity. It is estimated that by 2005 we will reach 30 percent in the United States, which isn't a lot.*

Where do you think the future growth potential in this area is in your economies?

MR. PETERSON: First of all, the statistic that I mentioned of five percent penetration was of the B-to-B marketplace, and it was intended to reflect the amount of business that is being done, through auction facilities and things like that, between businesses. And at five percent it may have seemed high to some of us.

The hesitation in the deployment of broadband to the home is a very different problem. I think that the growth in the business use of the Internet is going to continue. There are good pre-Internet business concepts and values that justify using that technology to be more efficient. On that basis they will go forward.

My own belief is that some of the problem with B-to-C type of interactions is that everybody hasn't bought into the higher value of that kind of marketing. By "everybody," I mean a lot of the consumers haven't bought into that. Our kids have, so one way to see these much higher rates is to wait until they grow up, and then this thing will be a lot bigger. But many of us who spend certainly all the money we make, maybe a little bit more, are really much more comfortable in buying a book in a bookstore where you can browse through it, buying clothes where you can try them on, or at least see the color in a way that you are really convinced it is going to be right, and don't want to have the burden of

sending it back if it is not right.

So I'm not sure the value proposition behind shopping or acquiring things at the consumer level has yet caught on.

MR. WETMORE: I think that particularly in the short term it is all about what you can justify in the business case. Clearly, B-to-B is miles ahead of B-to-C in terms of providing investment justification, if you will, in terms of increasing revenue, reducing our cost, etc. So the dollars that are available for investment are going to flow to where the return is more immediately obvious.

I think we are going to have lots of interesting growth of B-to-C operations coming off a relatively small base, and there is lots of creativity there, but the major Internet IT type investments are going to be driven to some degree by B-to-B justification, would be my assessment.

QUESTION: *We know that worldwide, small and medium enterprises tend to be a major driver if not the major driver of job formation. The biggest barriers in the past have been the cost of marketing and distribution and sales to these small enterprises. Are there any attempts to deal collaboratively between Canada and the U.S. in terms of small businesses, and also worldwide, with very small businesses around the world?*

MR. BRODY: Our business model was predicated on the aggregation of small business, which we thought would be a wonderfully easy thing to do, which was quite naive of us. As we walked down the road, we managed to do it very successfully, but not the way we thought we would.

We went out and, actually with IBM, we found that the best way to build communities of small businesses was to do it through channel partnerships rather than directly speaking to them. Most small businesses will hold core relationships with one of these entities: their bank, their telco, and often, depending on where they are, certain financial service providers beyond a bank.

So we had a period where we were struggling to acquire small businesses. We started at about 4,000 in Canada. Today, a year and a half later, we are at 1.2 million. For that very reason it was quite cost prohibitive to do. The deal was actually struck for two different types of contents tailored to the markets, but it was between IBM U.S. and Canada and across the boundary between Canada and the U.S. It was quite effective.

MR. WEBER: On that subject, too, I would like to loop back around to the broadband question. Years of experience shows that especially small businesses have gotten into the online game not coming from the top with

professional access and professional systems, but much more cobbling together consumer technology and consumer access to put it to work for their businesses. I remember years ago a point in time in which any self-respecting small consulting company's business cards had 10 different email addresses. Before everyone was hooked onto the Internet, you had to have a CompuServe address, an AOL address, Prodigy, and so on.

These days I still see a lot of not just individuals, but small businesses using dial-up access or consumer access plans. A lot of the problems we have had lately with consumer DSL providers, I know have hit some small businesses pretty hard. I have always had a difficult time separating out the consumer from the small business market with that issue.

MR. WETMORE: Two comments on broadband. One, your question of is it sufficient for us to sit here and just let it take its natural course, the answer is no, we can't. A small number of us in the room here have participated in something called the Canadian Task Force on Broadband for Canada. I think we have the commitment of the private sector and the public sector in Canada to have all of our communities wired by 2004. The feedback we got from small businesses is that it is really important to getting on with being successful in this technology. So I think

we overtly have to move more aggressively in that space.

MR. FITZGERALD: Of course, Canada got a big headstart on broadband to the consumer, because even before the days of the Internet you had the highest percentage of cable TV wiring in the world, way ahead of the U.S.

QUESTION: *Going back to the earlier question about B-to-B growing faster than the B-to-C, how much of that lag on the B-to-C is due to the consumer's concern about privacy of information and fraud on the Internet?*

MR. WEBER: From an information security perspective, I feel like we got past it a while ago. Most of the credit card fears are gone. I am worried that for the future it is going to hold back some of the efforts we might like to see, especially in medicine and health, things where the privacy issue really hits home.

I also think that is one of the most important cross-border issues to get a grip on. No matter what you read in whatever papers, the U.S. and Europe, for instance, are still miles apart philosophically. I wouldn't call it consensus as much as collision as we try to hammer out some of these issues.

For what you see out there right now, I think we are OK, but for some of the applications we hope to build,

especially in health and medicine, we are not there.

MR. BRODY: If you look at this morning's issue of *Red Herring*, there was a survey about why most consumers are not buying online. The number one issue by far and away was the matter of I can't try it on or I can't see it or I can't touch it.

I think we are miles away from getting to that point on the Internet, as the death of DigiScent underscored. That company, which went out of business, was going to make your computer smell. I think we are quite a ways away from that.

QUESTION: *You said that companies are increasingly buying locally regardless of where the back end is. Could you describe where you think the front end and the back end are going? In particular, do you see a large and increasing role for work being done in China, India, Pakistan on the web for consumption or use in the U.S. and Canada?*

MR. BRODY: That is a good point. It was actually something that we were quite surprised at, frankly. Particularly in financial services and web services, we are noticing a trend that companies are now, both for fiscal reasons and for just plain old human relations, looking to see the front end of those service providers and tech providers in their front door. We want to touch them,

feel them, know who they are and have strong customer service.

I don't think there is as great a concern about where the back end work is being done, frankly, as we have seen with companies like Infosys where you have large amounts of developers outside, offshore. India is just one of those territories. You mentioned China, and now Vietnam is starting to grow in that capacity as well.

I think you will continue to see that. I think you will continue to see the front end be local and the back end really be provided from wherever the cost of labor is cheapest. It is labor arbitrage effectively at that point, and the quality is at the level that it is comparable.

MR. PETERSON: I would like to put up a different view — a variation on a theme. One of our customers sells credit cards. They sell them through affinity groups. They basically call you and ask you if you want a credit card in the name of your church or your Boy Scout troop or the college you went to or something like that. They operate a lot of call centers.

They wanted to take that market opportunity and apply it to Europe. They opened a call center in Ireland to call into Europe, and they were doing well. They were getting the one call in 10 that would ask for a credit card. They had excess capacity in that center, and they decided to use it to

address the U.S. market. Obviously, if you have a big pipe you can call the U.S. for essentially the same cost as calling from Boston.

They got the same response. But when those Irish operators started to hit Irish Americans, the take rate went up three times. This is not a two-week phenomenon. They continue to market into the U.S. to the Irish community out of Dublin.

Extend that model into the Spanish-speaking community and think of marketing out of Mexico into the United States, call centers calling in to Spanish-speaking homes. Attendo is a company out of Spain that runs 20,000 call center seats in 12 countries. Eight thousand of them are Internet-connected, which means they are substitutable. So they can market into Spain from Chile or into Mexico from Argentina, and they do. And it's a good business.

The same thing is going to happen, potentially could happen, with the diaspora of every ethnic variety you want to think of, and that is going to change commerce as well.

MR. WETMORE: Part of my new job is running those new centers for IBM Americas. We have centers in Colombia actually that market into other Andean countries. Europe is interesting. We have a center in the UK that services Europe. But we find

that for general services, for inbound type of services support, it works really well. It is hard to sell PCs from the UK back into Germany or France, and we find that the centers in those countries do a far better job in their local economies when you are trying to sell a fairly high value kind of item.

QUESTION: *We are not going to have broadband in every home by 2004. First, how would that affect the U.S. as an economy? Second, does anybody have any ideas of how we can get broader broadband deployment?*

MR. DORROS: I don't know if this is the dominant answer, but it seems that both DSL and cable, which are the two sources of bringing broadband to the home that are quasi-available today, are both over-regulated. The regulation requires that the assets of either the DSL capability or the cable capability need to be available to other parties, at or below cost. You have two, three, four different parties that are all trying to get a share out of the same 40 bucks a month, or whatever, and each trying to make a profit.

It seems to me that if the restrictions imposed by the regulation and the forced availability of each other's assets were lifted, the marketplace might speed up broadband access deployment, or at least there won't be any artificial barriers to blame it on.

MR. PETERSON: From an economic standpoint, DSL, at least in the companies I have been most recently with, has been viewed as a cul-de-sac kind of technology. You can put it out there, it refreshes the existing stuff and gives it longer life, but the payment rates on those, as I understood them, wouldn't let you recover that investment.

Fundamentally, DSL from a telco standpoint I think is a defensive strategy. It is never going to handle video. What it does is it keeps cable companies from peeling off the telephone business. So if the cable companies aren't aggressive in employing telephony, you aren't going to get an aggressive response from the telcos for DSL.

They all know the technology they want long term is fiber, but they can't quite justify that yet. So there is an economic thing here that is discouraging people. Notwithstanding, we all think we want broadband. Nobody pays enough to put the DSL in, write it off in four years, and put fiber in again. Until somebody comes up with the money, I don't think this is going to accelerate.

MR. DORROS: If the telco were assured through the regulatory model that if it invested in bringing fiber to the home it will have that fiber for it to bring in services of its own rather than

be forced to make that fiber available to others at or below its cost, they would be motivated to do that.

QUESTION: *When do you foresee or expect the wireless Internet to be a significant contributor to the digital economy?*

MR. PETERSON: My own belief is there is no magic there, that that is another thing that has been oversold. The reason I say that is I don't think very many people, especially people my age, with reading glasses, want to browse on a one-inch square screen.

So I think it will be built, because there is so much money on the table. But my own belief is it is going to be very slow, because I don't believe that simple access to the web is going to be enough.

MR. WEBER: I just think it depends on what your definition of success is. On the one hand, you have had all these flailing efforts trying to make compressed versions of websites and that sort of thing. You say, oh, gee, look how hard it is.

On the other hand, if this isn't one of the coolest, most valuable gadgets ever produced, I don't know what it is, and it's wireless. It helps me get my work done.

Sometimes it is a matter of narrowing your definition of what success is. If success has to be that you can have the complete desktop experience of the Internet as you walk around, who

really wants that? If success is using wireless technology to help you get the tasks that are important to you while you are walking around accomplished, I think we are making real progress.

MR. BRODY: That is an interesting point. If you look at the wireless world, whether or not we are in a wireless bubble yet I think will soon be seen, but it is quite a microcosm of what the dot-com era was. I think you are going to see the same backlash in wireless that you saw in dot-com, except for the infrastructure, which is obviously extremely important. But on the front end of wireless there are some incredibly ridiculous models that are being built now that I think people are going to find really challenging to sell.

PANEL 2

Competition Policy, E-Commerce, and the Global Economy

PETER HARDER:

This panel discussion will explore the growing consensus that first, we have all become fiscal conservatives; second, we have all become free traders and therefore committed to economic space that is bigger than political space; and, third, and I believe this is a new phenomenon, we have all become committed to what it means to be in the new economy, the Internet economy. To truly take advantage of the new economy means to better align the political space with the economic space. The reality is that one is smaller than the other, so you want to give advantage, in our case in Canada, to the northern half of the economic space. But we will have some interesting dialogue as to what the experience south of the 49th parallel is as well.

JOHN ECKERT:

My firm, McLean Watson Capital, which I founded, is a venture capital firm. We are based in Toronto. We are focused on the information technology side. We typically invest in relatively early-stage companies.

Let me roll back the clock somewhat to 15 years ago, when Canada was less of a welcoming business environment. At the time we suffered from double-digit inflation, we had double-digit unemployment, our interest rates were very high, the economy was somewhat lackluster. From a foreign investment perspective I don't think we had any cachet whatsoever

This is an e-business conference, and I wanted to point out some facts on Canadian ranking within this exciting sector. I don't think I have seen a study yet that has come out that has not put Canada in the top three or top five countries, regardless of what measure you want to look at.

One of the things that I think really separates us from so many countries is our commitment to human resources. We are ranked number one in global competitiveness per capita of available knowledge workers. What is interesting is that we are also an extremely cost-effective place in which to carry out business.

In fact, I had the pleasure of selling one of our portfolio companies,

FloNetwork, to DoubleClick, a transaction that closed just two weeks ago. For those of you who don't know, FloNetwork led the world in direct e-mail marketing with very sophisticated back end analysis and reporting. DoubleClick bought us because they just couldn't compete against us.

When they looked to consolidate the two groups, the fundamental question was where do we locate? Do we do this in Atlanta, where their group was, or in Toronto? It very quickly became evident that Toronto was the only choice, because it was 50 percent the cost of doing business in Atlanta.

We have the Canadian cost structure and we generate our revenues in U.S. dollars. But it is more than that. It is also related to employee loyalty and lower rates of turnover and just a less competitive environment for top people

I mentioned the government's commitment to success. I think this really does deserve some emphasis, because it forms the infrastructure. I think the most important fiscal change is the recent tax cuts. Canada for years has had a reputation as being an over-taxed economy. That has all changed.

We have seen in the past year a 50 percent reduction in capital gains tax in particular, and some dramatic corporate tax cuts that make us very attractive. Of course, this may change with some of the legislation that

President Bush is moving through, but if that is the case, then I guess we can afford further cuts.

We are very solicitous of small business in Canada. We have a \$500,000 lifetime capital gains tax-free position on the first half million made, and a very aggressive series of laws that support and encourage early stage business, which gives us a great lead.

We have an expanding pool of capital. This is what is most close to my heart. The venture capital market and private equity market have grown dramatically in Canada. It was very difficult to have sourced funding even five years ago in Canada, and those entrepreneurs who were in the technology sector found it particularly difficult. That's all changed. We are seeing now a very strong and vibrant venture capital market — \$6.3 billion was invested last year.

We also avoided a lot of the carnage that is now gripping the U.S. private equity market. It is not that we were so much smarter, but the opportunities were not as available in Canada to pour money into the dot-com sector, so our investments went to infrastructure and enterprise applications, telecommunications in the enterprise area. That has not been as hard hit, hence the hangover from this party in Canada will not be as long or nearly as painful.

We are also bringing a lot of money into Canada now for the first

time. We are striking partnerships with foreign investors, of which the majority are from the States. That's all great, except that it is not enough. One of the objectives is to encourage more.

If one looks at the rate of growth that we have experienced through the year 2000 in the venture capital market, you see Q1 — \$1.1 billion — was sort of flat. Although, if we look at that next to the U.S. experience this shows actually percentage growth in comparison on a quarter year over year basis.

Growth in the States was more dramatic in the first two quarters of 2000, and in the third and fourth quarter Canada really leapt ahead. That has narrowed the gap dramatically. We are now back to the old one-to-10 ratio that for years has characterized our economy relative to the United States.

The message I do want to leave is that Canada has changed a great deal. We have fixed a lot of the problems that have plagued the country in the past. We do lead in the global business sector. It is based on a number of factors, but certainly I think our human resource base is extremely important. Our capital market is expanding and I expect will continue to expand. And I think it is all backed by a commitment by government to remove the cobwebs that would otherwise plague the development of Canadian business.

EVERETT EHRLICH:

The world of the Internet and e-commerce and zero-cost information leads us to ask what is it that allows countries to become competitive? What are the new sources of economic growth in the U.S. and in Canada and the various nations of the world?

Economists thought about that question 200 years ago when Ricardo wondered why the British traded their wool for Portuguese wine. He determined that countries had endowments of resources and that they expressed them through the trade of goods.

If there is anything that is particularly important perhaps about the Internet and about the digital economy, it is that it has undermined the view that Ricardo brought to the world, and that is that it has dramatically accelerated the trend that leaves us in this situation: Any firm anywhere in the world can get virtually any resource. Blueprints move by fax, technology through joint ventures and partnerships, all of which are enabled by zero-cost freely flowing information. Capital, of course, moves as zeros and ones. Cad-cam specifications, production scheduling and information, all have turned into information shared over networks that allow many firms to operate as one or, alternatively, any one firm to open itself up and

discover that there are really several firms within it.

The upshot of that world in the U.S. and Canada, certainly as leading nations that have taken zero-cost information/free flow of information to heart in their economic structures, is that all factors and all resources are mobile. If that is the case, then the question remains: What distinguishes one country from another in global trade? What makes a country competitive? What is distinguishing and eternally domestic in nature?

I think in shorthand, the answer to that question is the environment that it provides to its businesses. That is, if any firm anywhere can get access to any resource, then what distinguishes how well firms will do is the environment within which they have access to and combine those resources.

What are the elements of that environment? The most frequently cited is education. I actually think that education is perhaps the least important on the list. But it is important in a defensive sense in that a well-trained labor force is a prerequisite of the international economy. It is an ante. You have to have it to play, but it will never be a distinguishing characteristic.

It is also true for infrastructure. Infrastructure has always been a target of policies aimed at destroying competitiveness. We used to mean concrete infrastructure, the edifice complex,

bridges, ports, dams, harbors, airports, and the like. Now we mean telecommunications networks, standards, and protocols

Macroeconomics and the tax code have been referred to. Of course, you get what you pay for or what you ask people to pay for, whether it is the tendency to undersave and overconsume that has its roots in the tax code in the United States, the tendency to horde pretax profits and build overcapacity, as was the case in Japan thanks to their tax code of the 1980s, or the enduring preference in continental Europe expressed in the tax code in which we would rather have today's jobs than tomorrow's and therefore get more of the former and fewer of the latter and over time fewer overall.

But it shows up in other areas that are perhaps more accomplishable as well. One of them is corporate governance. If it is the case that the world can bring you any resource, then determining what your business really is is perhaps the most important task of a CEO in business today. But there has to be a governance system that holds her or his feet to the fire. There has to be a structure in capital markets that rewards that behavior when these decisions are made correctly and that punishes them and directs them towards the right answers when they are made incorrectly. There also has to be a system that funds those

investments and that allows the capital stock to adjust to those new conditions, to the new technology, and to the new definitions of firms that allows resources to come there.

The venture capital industry, of course, is an important part of that. Another important aspect of this environment is openness itself. If it is the case that successful firms will be those that go around the world and find the most appropriate resources to lever their own value-creating abilities, then openness becomes an important national asset.

One of the dramatic conclusions of the 2000 census in the United States was that there were apparently five million more undocumented alien workers who were in the United States economy in the last decade, which would explain why you can run an economy at four percent unemployment with real wages staying within the bounds of productivity gains. It adds up to one out of every four jobs created in the United States in the 1990s was taken by an undocumented foreign worker.

It is a remarkable finding and it raises a variety of questions, one of which is can an advanced economy function without having the ability to bring that kind of labor? And it is not unskilled labor. It is programmers, it is engineering talent, it is software code writers from around the world.

Can an economy function without that?

Perhaps the last attribute I would mention very quickly is culture itself. The culture of entrepreneurship in the United States made it look like an unruly place in the 1970s and 1980s. But suddenly, when the technological regime shifted, it made it look like a very progressive place, that you could have an economy where the Wright brothers and Edison and Bell as well as Hewlett Packard and Apple and Xerox and Dell come out of bicycle shops and tool sheds and garages. That kind of culture is very important in the U.S. And now, married to a technology that gives it its full expression, we see the kinds of results that it creates and can be contrasted to the culture that pervades management in other parts of the world.

PETER NICHOLSON:

BCE stands for Bell Canada Enterprises. It had its roots in one of the Bell system telephone companies, this one operating in the provinces of Ontario and Quebec, and also was, up until last May, the majority shareholder of Nortel Networks.

When we spun Nortel back to our own shareholders, we were left with a much shrunken presence and said,

what are we going to do to grow? So we committed ourselves to be what I have called here a convergence enterprise, which is to go beyond our roots as a conventional telco, obviously continuing to provide connectivity, but amplifying that with content and obviously with commerce. Moreover, we realized we couldn't grow adequately restricting ourselves to our traditional service base in Canada, but also had to branch out internationally.

Bell Canada itself is a conventional area telephone company except that it has a long distance service to it, and therein lies an important tale. The fact that there wasn't structural separation in Canada has given Bell Canada, unlike AT&T and the other long distance model cultures, a continuing cash flow coming through the local service, as long as it lasts. We all know that eventually voice is going to be the closest thing to free.

The tough issue is how do you get broadband from the fiber termination through copper, through cable, into the home.

These are very interesting figures as of the end of Q1 this year. With about 465,000 DSL customers, which is about a third of our total Internet subscriber population, we are the largest ISP in Canada. Significantly, a lot more substantial in absolute customers numbers than either Qwest or Bell South, notwithstanding the fact that they have

a much larger source population. And we are not that shy of Verizon or even SBC, which is the U.S. poster child for broadband.

The regulatory climate in Canada I think has been a little more conducive to the right incentives. I was very interested in reading the commentary on that in the CED report. But secondly, for some reason the cable industry has been much more vigorous competing for the broadband connection to the home in Canada than apparently they have been in the U.S., and we should talk about why that is.

Now what I want to do is talk about the policy question. We have been a part from the beginning of a group called the Global Business Dialogue on E-Commerce. This group has caused me to think about how we are going to govern this beast that we are creating. Ellen Tauscher, a Democratic representative from California who is also one of the co-sponsors in Congress of a resolution urging that there continue to be free trade in e-commerce, said:

"We need to keep the Internet international and ensure that e-commerce is not obstructed by the potentially conflicting laws of 200 nations." Of course, it is inherently a stateless medium, so one has to deal with the fact that national jurisdictions are not going to be sufficient in and of themselves to manage the issues that show up.

The other thing about it is that it is evolving very rapidly. It is far from a fait accompli, it is a work in progress. As Representative Tauscher said, it would be foolish to think that the legislative calendar would be ahead of the technological curve.

I think two things follow from that. We need more leadership from the private sector, because these are inherently transnational organizations. Secondly, we need flexible approaches, because we are learning. What governments have done, actually is turned to the private sector and said, please help us, tell us what we should do to try and make e-commerce flourish. The E-Business Roundtable, of which I am part, is part and parcel of that exercise.

Let's take a look at what some of the efforts of the agenda are: consumer groups, not surprising, which raises the issues of privacy and data security and what-have-you; cyberethics, that is one person's pornography is another person's art, etc. Other issues on the agenda include the digital divide, taxation, cybersecurity, intellectual property, and cultural diversity.

After three years, what has happened is it is proving difficult to maintain CEO-load momentum for these kinds of agendas. There are a couple of reasons for that. The first is that beneath the surface, and we have

scraped off the topsoil so we are down in the bedrock, it turns out that corporations are finding that they are divided very much the way their own societies are. I think a lot of CEOs are discovering that politics is a little bit harder than business. Einstein said it was harder than physics.

That has led me to recognize that we are facing here a generic challenge facing both governments and the private sector, and that is to develop effective, timely, and legitimate governance for the global economy. It expresses itself most dramatically perhaps in the case of e-commerce, because it is so inherently stateless. I think the only reason it hasn't become more obvious that there are big problems here is the penetration of e-commerce in the fabric of the economy is still relatively small. But I can tell you, as it grows, as it inevitably will, these issues on the agenda are going to get bigger and bigger.

So there clearly is a new challenge here for a level of cooperation and partnership that is really unprecedented. I don't think it is the kind of cooperation that you can hand off to a UN or to a WTO. These organizations are not close enough to the issues. In fact, they are still representing the parochial interests of individual states.

I leave this hanging as a question. I don't know what the answer to this is. I think this is going to be a bit of a voy-

age of discovery. What is interesting about the GBDE is that it is a first attempt in this particular area of e-commerce to start to come to grips. It will be very interesting, I think, to watch what it does over the next two or three years.

PAULA STERN:

Yes, I am a CED Trustee. Yes, I'm even a small business owner and an entrepreneur. And as Mr. Brody talked about earlier, we startups and entrepreneurs will lead the way for the rest of the world. So I can pretend to be in that group.

Yes, I'm a consumer in e-business, and I can certainly talk a lot about what is wrong and what is right about what we have seen heretofore, but I think everybody in here probably falls into that category.

And yes, I have been both in the public sector as well as in the private sector. My government experience was at the U.S. International Trade Commission (ITC). There we dealt with the issue of competition every day. At the ITC I was looking at the question of import competition.

I focused at that time on the hole, not the doughnut, because the ITC dealt with friction between different industries in different sectors. The

complaints would come to us when a particular U.S. industry felt it could not compete. We heard everything from potatoes to steel to berries.

I must say that not only has Canada been a tough competitor in a lot of these different industries, but Canada has also been a very important leader in breaking down trade barriers in order to encourage competition.

The barriers that we dealt with have been border barriers. Today, however, we have talked about what the governments do internally in their own regulations as well as externally in terms of borders, barriers, tariffs, quotas, whatever, that cut down on the comparative advantage of a particular company or a particular industry.

I think it is ironic actually that this whole afternoon's discussion on a borderless economy, a seamless economy, should even be talking about comparative advantage. So in a sense there is a cognitive dissonance this afternoon, because we are talking about this world of the Internet, and yet we also have this underlying theme of a comparative advantage of a nation which is border-bound, which is, if you will, almost contrary to the economic model that we set out to talk about in discussing e-commerce.

The fact of the matter is governments do have a lot to do with shaping the environment within which any entrepreneur has to operate —

environment, education, also fiscal policies and other policies.

I would like to just throw out for the sake of discussion the idea that immigration policy is in this year of 2001 economic policy in a certain sense. If we are recognizing the mobility of brains, brainpower, then that country which encourages immigration openness is encouraging a bright future.

I think of this in the context of an assignment I had recently on why the European pharmaceutical industry is lagging in competition compared to the United States' pharmaceutical operations. You can go through the regulatory questions, you can go through the legal questions, you can go through their science and the education and all of this, but I believe that immigration policies, cultural policies towards newcomers, towards new ideas, is critically, critically different and does make a difference.

There is a difference between, for example, being a guest worker in Germany and being an immigrant who can stay and put roots down. So I do think that immigration policy, and not just allowing people who speak different languages to come for a short time, but really put their roots down, does make a difference. That has been a comparative advantage for Canada, as well as of the United States. And I know that CED has

done some very good work on this particular issue.

In closing, I want to talk about some of the more traditional government ways in which the economic destinies of the entrepreneurs and small businesses and new companies are impacted. I mentioned the border-based protectionism versus free trade, trade policy shaping and encouraging competition. But I would like to close also with just a few words on antitrust policy, as the U.S. calls it. Everyone else in the world calls competition policy "competition policy," except us in the United States.

In this terrific CED study on the digital economy, *Promoting Competition, Innovation, and Opportunity*, there are some references to the role of antitrust on competition policy in shaping the outlines of the future. I am grateful that the recommendations of a group that I co-chaired for the Attorney General of the U.S., a group called the International Competition Policy Advisory Committee (ICPAC), are mentioned with some of our recommendations.

We have tried to attune the ICPAC report, which was written last year, after two years of work, to the future. We tried to attune it also to e-commerce. We came up with the conclusion that there is a need for better global governance, in particular for an exchange of best practices, a clearing-

house. We called it a Global Competition Initiative, that would deal not only with harmonization of merger policies, which differ among the 60 and counting countries, each of which has their own merger policies, but to also deal with best practices enforcing against anticompetitive activities, including international price fixing cartels, and give technical assistance to those countries which really do not have the manpower or the resources, but do want to be pro-competitive in their government operations.

Finally, under the rubric of how governments can shape the rules of the game for industries is standards-setting. This is particularly important in the fast-moving, rapid technology that characterizes the Internet and e-commerce and e-business. There is a tension between wishing to see harmonization of standards so as to encourage innovation based on a shared notion of what the market is, on the one hand, and the concern about dominance and domination, that if you set into place a particular standard you are being anticompetitive and leaving out those who are developing new products, new businesses based on a competing standard.

These are three different areas — trade policy, competition or antitrust policy, and standards-setting, which in some cases can be a subset of competition policy — in which governments

can either help or hinder. Ultimately, I believe that it is the culture of openness, embracing new ideas, new people, new brains, and welcoming them that will always be the most important factor in empowering new ideas to become new products and new services.

QUESTION: *I am wondering if there are some ways in terms of best practices, clearinghouses and information, to create some kind of a global standards committee? What is really the etiquette in the new world of electronics?*

MR. NICHOLSON: We have discovered through the GBDE process that at a certain level it is not difficult to get agreement. The devil, as they say, is in the details. And nobody knows that better than the great negotiators. The GBDE has a great set of privacy principals. We have basically incorporated that in legislation in Canada. The legislation is perhaps to give consumer groups some confidence. I think most of the major companies are committed to these in any event, but they gloss over at a higher level some of the tactics that commercial behavior leads you to.

I stand to be corrected here, but I think that one of the differences, for example, between the European view and the North American view regarding privacy is a question of where the onus lies. If, for instance, you are

being asked to give some personal information on a website and you choose not to, well, the person whose goods or services you are trying to acquire can then refuse to do business with you. That is sort of the North American approach. Yes, you have the right to opt in, but if you choose not to, sorry, you can't buy what we have to offer. Whereas, in Europe the onus is frequently reversed, typically reversed, where organizations do not have the right, if they are offering their wares in the public market, to hold back if someone refuses to make their personal information available.

MR. EHRLICH: I see a big difference between cultural standards and technical standards. The differences in cultural standards don't bother me—what constitutes privacy and what constitutes pornography, and so on. Internet content is simply a different medium. In the latter issue, certainly privacy has come up before. The world has different views about that. It is probably a good thing that it does. It makes it a less hegemonic place. They will compete a bit and tailor themselves. It will be interesting to see that work itself out.

Technical issues, standards and protocols, I think really are the issue. The problem is there isn't the predilection of different people to feel different things, but different companies having different intellectual

property and worrying about the asset value either moving up or down by an order of magnitude. The good news is time heals all wounds, because it brings with it technological progress that allows technology to gloss over or rise up above those different standards. So time is on our side in the latter and makes the former perhaps more interesting.

QUESTION: *What climate creates the capital formation that creates these new jobs we all want for our economies, either locally or nationally? It makes a vast difference what the capital climate is to the entrepreneurs. Are the entrepreneurs considered important in this process?*

MR. ECKERT: Yes, the first company we took public was SoftImage, which was a world leader in software animation. It was a big hit. We sold it to Microsoft ultimately. But we could never get the valuation we could have, had we been based in the States. There was no way.

There was a Canadian discount. Our symbol was SFITF, for "foreign," and on top of that we had the Quebec stigma, so we were discounted by 20 percent. Yes, were we to do it again and had complete control, I would have based the company elsewhere. And maybe I wouldn't be sitting here today, I don't know.

I think it is still a big issue. The hearts and minds will follow the wal-

lets. We have been laboring with that issue in Canada a lot, because NASDAQ is the big market, and we lose a lot, have lost historically a lot of our best and brightest to Silicon Valley. There were upwards of 350 to 500,000 Canadians in the valley, depending on what statistic you believe, and a lot of them went down there for riches. We are trying to change that, because it has been a problem, and I think we have made some inroads. It is not the only thing, there are other factors, but I think your point is legitimate. It is a significant factor.

MR. NICHOLSON: There aren't that many Silicon Valleys in the U.S. either. So there is something more than just the physical and the capital raising climate going on. I think it is the cluster dynamic, and much has been said about that.

Obviously, it is important to get the right incentives, and sometimes they are almost accidental, to get the snowball rolling. But once it does, it becomes a very powerful magnet. Notwithstanding the fact it is one of the ironies of Silicon Valley, these are the people that gave us telecommuting and the borderless whatever, etc., but yet nowhere was physical proximity more important. And we all know what some of the reasons are for that. It has to do with the market for talent and the ability to look somebody in the eye, etc.

So I think in that regard one of the really encouraging things about Canada is that, and the minister referred to it, we now have a cluster of sufficient critical mass that they are self-generating centers of opportunity.

Having said that, it is pretty obvious that the framework structures in Canada have now had to adapt themselves to this more open global world that we are in, and I don't think that is a bad thing. What I think there is a lot less of today, and we can thank the World Trade Organization for it, is a lot of old-fashioned blatant subsidies. This was a zero-sum game. Ultimately, it was a loser for everybody. I think largely we are away from that.

But in terms of setting the environmental framework policies, we are still very, very much at the cutting edge.

QUESTION: *Canada has taken the lead in international good works in many ways, and I wonder what Canada is doing in closing the digital divide or helping to close the digital divide internationally?*

MR. HARDER: At the Summit of the Americas in Quebec City only a few weeks ago, the party gift I guess of the government of Canada to that summit was an endowment of \$20 million to deal with the digital divide. That endowment is to be managed by the International Research and Development Center, which has specialized in the last number of

years on issues of digital divide and development.

In Canada I can say we have applied some of this internally, where we have not only connected all schools, but have put in place a series of community access points in both urban and rural communities which ensures at least some level of availability of the Internet to all strata of society. Issues of the digital divide are very much a part of how we would roll out high-speed broadband to ensure that we are not rolling it out only to enhance that gap. We are going to have to think of creative ways of using public policy instruments, where appropriate, to ensure that we all participate with equal opportunity.

MR. EHRlich: In thinking about immigration, emigration, and the natural flow of labor, the expatriate model is an old model. What we deal with today in the world is really a global workforce, not in a trite sense or a platitudinous sense, but that we have got people who go to other countries and work for three, four, six months, go back home to where they want to live. Like the Canadians in the first part of the story, they are really not that knocked out by life in the United States — which has pluses and minuses, they have family roots and the like — and in fact will make several of those trips in the course of a year,

perhaps going to several different countries.

These are really global denizens as opposed to citizens. They are not expatriates, they don't move, but they follow work around. Now the work is writing software and building networks and doing engineering and the like in a variety of skilled service professions, and we don't really have a way to deal with them.

When we argue about H-1B visas in the United States, we are arguing about up or down 100,000 people, which is compared to a flow in the millions around the world. There are several models for how you address them. H-1B green cards are one. German guest workers are another. None of them really deals with the realities of this mobile class of workers, all of whom at any moment are \$300 away from either New York or Los Angeles if the situation strikes them as right.

That is really the immigration challenge of the future, setting standards and accrediting their skills and allowing the movement on terms that is consistent with economic well-being and at the same time social policy.

PANELIST BIOGRAPHIES

Leonard J. Brody

Leonard Brody is Chairman and Chief Executive Officer of ipreo – a new online private equity simulation and research firm. Additionally, he is Director of Onvia Canada. Previously, Mr. Brody was Vice President of Corporate Development for Onvia Canada, as well as General Counsel and a Member of the Board. Mr. Brody is a member of The E-business Opportunities Roundtable in Canada.

Irwin Dorros

Irwin Dorros is the President of Dorros Associates, a consulting firm. Previously, Dr. Dorros served as Executive Vice President of Technical Services for Bell Communications Research (Bellcore). He has been a Trustee of the Committee for Economic Development since 1998.

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John Eckert is a Managing Partner of McLean Watson Capital Inc. He is the current President of the Canadian Venture Capital Association and Chairman of the Capital Markets Committee of the Canadian E-business Opportunities Roundtable.

Everett Ehrlich

Everett Ehrlich is the President of ESC Company. Dr. Ehrlich formed his company in 1997 after serving for four years as Under Secretary of Commerce for Economic Affairs. The author of two books, *Big Government* and *Grant Speaks*, he is also a regular economics commentator on National Public Radio's Morning Edition.

Edmund B. Fitzgerald

Edmund Fitzgerald is Managing Director of Woodmont Associates. Mr. Fitzgerald served as Chairman and Chief Executive Officer of Northern Telecom

Limited of Mississauga, Canada from 1985 – 1990 and as President from 1982 to 1985. Since 1967, Mr. Fitzgerald has been a Trustee of the Committee for Economic Development. He also served as CED's Chairman.

V. Peter Harder

Peter Harder was appointed Deputy Minister, Industry Canada, in March 2000. He began his government career as a Foreign Service Officer for the Department of External Affairs in 1977. For the next 10 years he held various private- and public-sector positions, culminating in his appointment as Associate Deputy Minister (Immigration) from September 1991 to February 1993. Within a year of his appointment as Deputy Solicitor General in February of 1993 he was appointed Deputy Minister of Citizenship and Immigration Canada from November 1993 to December 1995. In 1995, he was appointed Secretary of the Treasury Board and Comptroller General of Canada.

Peter Nicholson

Peter Nicholson is Chief Strategy Officer of Bell Canada Enterprises Inc. (BCE Inc.), Canada's leading communications services company. Dr. Nicholson was previously a member of the computer science faculty of the University of Minnesota; served in a number of senior positions in the Government of Canada; and held elected office in the Nova Scotia Legislature.

Donald K. Peterson

Donald Peterson is President and Chief Executive Officer of Avaya, and Vice Chairman of Avaya's Board of Directors. Previously, Mr. Peterson had been Executive Vice President and Chief Financial Officer of Lucent Technologies. Mr. Peterson has been a Trustee of the Committee for Economic Development since 1999.

Paula Stern

The Honorable Paula Stern is President and Founder of the Stern Group, Inc., an international trade advisory firm in Washington, D.C. A former Chairwoman of the International Trade Commission (ITC), Dr. Stern advises private businesses and governments on trade issues that affect their competitiveness in the international economy. She has been a Trustee of the Committee for Economic Development since 1990.

Tom Weber

Tom Weber writes E-World every Monday for *The Wall Street Journal's* Marketplace page. Mr. Weber developed and launched E-World in 1999. Mr. Weber is a senior special writer at the *Journal*.

Brian Tobin

The Honourable Brian Tobin was appointed Canada's Minister of Industry in October 2000 by Prime Minister Jean Chrétien. The Secretaries of State that report to Minister Tobin oversee: Science, Research and Development; the Atlantic Canada Opportunities Agency; Canada Economic Development for Quebec Regions; Western Economic Diversification Canada; and the Federal Economic Development Initiative in Northern Ontario. Minister Tobin was first elected to the House of Commons in 1980 as a Member of Parliament and was appointed Parliamentary Secretary to the Minister of Fisheries and Oceans in 1993.

John D. Wetmore

As Vice President, ibm.com, IBM Americas, John Wetmore is responsible for executing IBM's TeleWeb strategy and implementing new business-to-business marketing and sales tools for customers in Canada, the United States, and Latin America. Most recently, he was President and CEO, IBM Canada Ltd.



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