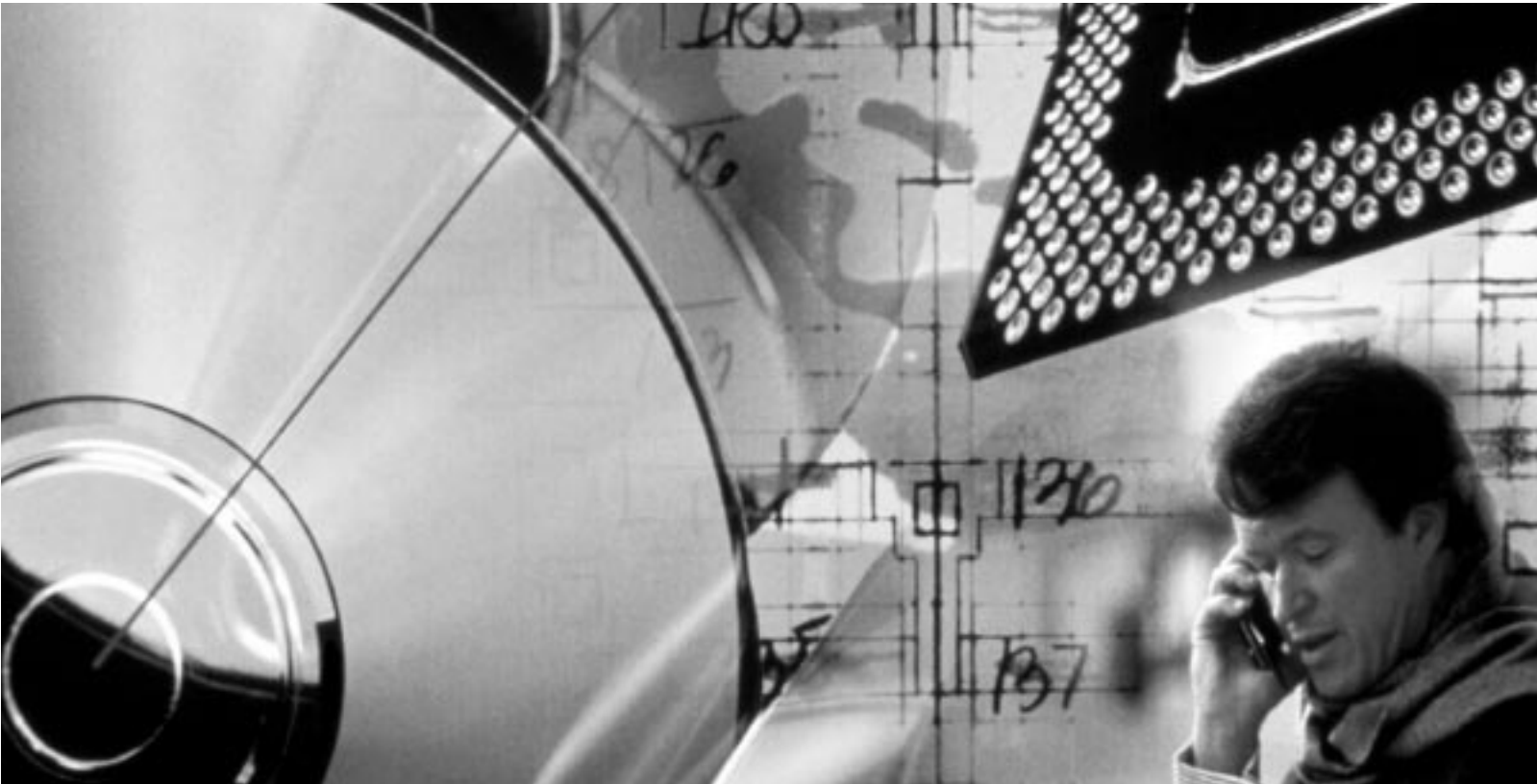# Maryland Information Technology Board
Internet Policy Recommendations

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MARYLAND INFORMATION TECHNOLOGY BOARD

INTERNET POLICY RECOMMENDATIONS

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MARYLAND INFORMATION TECHNOLOGY BOARD

INTERNET POLICY RECOMMENDATIONS

I.   INTRODUCTION

The 1999 General Assembly enacted House Bill 684 which adds a member of the Maryland Senate, House of Delegates, and Judiciary to the Information Technology Board (ITB) and charges the Board with developing standards and making recommendations on various existing and emerging Internet technologies. As a result, the ITB created the following five committees: E-Commerce, Emerging Technology, Privacy, Internet Based Crime, and Health Care Industry. The committees met throughout the summer and fall and receiving testimony from dozens of business leaders and technology experts throughout the State and region. The committees presented their draft recommendations to the ITB at its November 4th meeting in Baltimore.

The common goals of the Internet committees are to strengthen Maryland's position as a technological leader in the new economy of the 21st century and ensure that the interests of our citizens relating to the Internet are protected and advanced. The E-Commerce Committee, chaired by Major Riddick and Delegate Peter Franchot, took the lead in developing a strategy to create the most advanced electronic business environment in the nation. The Committee named this initiative "*eMaryland*." The Emerging Technology Committee, chaired by Dyan Brasington and Donald Langenberg, is offering a series of recommendations to increase the State's role in promoting the development of emerging technologies and ensuring access to these technologies for all Maryland citizens. The Internet User Privacy Committee, chaired by Timothy Baker and Steve Rizzi, is recommending measures to enhance the use of the Internet by Maryland government, businesses and residents by promoting an environment in which personal information is protected. The Health Care and the Internet Committee, chaired by Jack Frost and Dr. Paul McClelland, is making a series of recommendations to encourage health care and medical uses of the Internet in Maryland. Finally, the Internet-Based Crime Committee, chaired by Lt. Tom Bailey, is recommending a package of legislation to revise Maryland laws concerning computer and Internet-based crimes.

II.   INTERNET POLICY ISSUES

This report presents a number of recommendations to put the State of Maryland in the forefront of an Internet revolution that is changing everything around us in what seems an increasingly rapid and bewildering fashion. From checking on-line news or stock prices to making plane and hotel reservations to buying tickets to this week's hot movie or bidding on items ranging from a rug to a Rolls Royce, more and more of us use the Internet in our daily lives. Strategis Group, a research firm, estimates that over 100 million adults in the U.S. already use the Internet, approximately half of all U.S. adults. By 2003, Strategis estimates over 500 million people worldwide will access the Internet. Jupiter Communications estimates that 75 percent of all U.S. teenagers and 85 percent of all U.S. college students will be using the Internet by 2000.

The Internet committees examined a broad range of issues relating to Internet policy and the emerging Internet economy. These issues included the following:

1. Creating a More Efficient and Citizen-Focused Government through Internet Applications;

2. Promoting Electronic Commerce in Maryland;

3. Facilitating Information Technology Research and the Development of New Technologies;

4. Fairness and Neutrality in Tax Policy;

5. Bridging the Digital Divide;

6. Protecting Citizen Privacy;

7. Unsolicited Bulk E-Mail;

8. The Internet's Emerging Role in Health Care;

9. Federal Health Insurance Portability and Accountability Act; and

10. Internet and Computer-based Crimes

III.   RECOMMENDATIONS FOR MARYLAND INTERNET POLICY

<u>Electronic Commerce</u>

Maryland played a significant role in the early development of what is now known as the Internet. The State's crucial role in the Internet continues, as the national capital region has emerged as the most connected, Internet-enabled region of the United States. The State is working with telecommunications companies such as Level3 to ensure the availability of high-speed fiber network backbones around the State. The University of Maryland College Park is entering into technology and business research alliances with Cisco, Lucent, Sun, EDS, IBM and Oracle and managing Next-Generation Internet/High Speed Networks. The state is home to a vanguard group of Application Services Providers (ASPs), that includes US Internetworking in Annapolis and Digex in Beltsville, industry leaders in the new hosted services model. In addition, a critical mass of e-commerce software companies, including GE Information Systems (GEIS), Appnet, CyberSystems, UPS Software Solutions unit, Manugistics, and Lockheed Martin is forming in Maryland.

Maryland's goal should be to capitalize on our 6500 technology based companies, world class research universities, and highly trained workforce to create the most dynamic e-business climate in the country. The Information Technology Board envisions a continuous stream of innovative applications moving across fiber and wireless high-speed networks in the State. Enterprise resource planning systems offered as a subscription service over the Internet for modest monthly fees will help our small- and medium-size companies achieve efficiencies that only the largest companies can now afford. Through a state Digital Portal, networked airport, port, rail and highway schedules and assets will provide transparency, enable frictionless intermodal handoffs and lead to low transaction costs inside the State. The ITB proposes *eMaryland* as a coalition of e-commerce initiatives under a strategic theme that will allow Maryland to brand itself as the "E-Business State."

1.   Brand Maryland as the E-Business State.

Brand *eMaryland* as the best environment for electronic business and commerce through alliances with the best technology companies in the world. Recruit technology executives into long-term partnerships with *eMaryland* and its associated state government, university, and business constituencies. Create a coalition around *eMaryland* to accelerate the creation and diffusion of e-business throughout the State and act as a national test-bed.

> *A. Create a CEO Board of Advisors for eMaryland to provide advice and create a stamp of legitimacy*

The State should recruit the leaders of the world's best network and advanced online services companies to participate in the Roundtable. The purpose of the Roundtable would be to offer insights for managing *eMaryland's* strategic technological, business service and marketing operations.

> *B. Create a coherent business development strategy for eMaryland*

Under the leadership of the CEO Board of Advisors, ITB, Department of Business and Economic Development and universities, a business development strategy must be created to implement *eMaryland* initiatives and publicize Maryland as an E-Business State.

2.   Adopt Enlightened Policies to Remove Barriers and Create the Most Progressive E-Business Environment in the Nation

> *A.   Private Sector Internet Privacy Principles*

While the State should set forth principles regarding Internet privacy in the private sector, such principles should not be mandated in law. Rather, the private sector should have the responsibility and flexibility to build consensus, establish standards, and revise these standards as technology and consumer demands change. (See recommendations on Internet User Privacy).

B. Enlightened Policies on Taxation

The ITB endorses the principle that the taxation of electronic commerce should be based on fairness and tax neutrality. In all likelihood, the taxation of Internet purchases will be decided on the national level. The federal Internet Tax Freedom Act passed in October 1998 creates a national three-year moratorium on the taxation of Internet access and services. Congress also created the federal Advisory Commission on E-Commerce to study tax issues related to e-commerce and make recommendations to Congress by the spring of 2000. In response, the states are working on their own proposal. The National Governor's Association, in consultation with other state and local organizations, is developing a zero burden tax collection system proposal which would significantly simplify and streamline the tax collection process for companies collecting sales taxes over the Internet. The ITB believes that this proposal could benefit e-commerce companies and warrants additional study.

The ITB recommends that access to Internet Services Providers should not be taxed.

C. Enlightened Policies on Commercial Law

Maryland should provide a legal framework that promotes and enhances the incorporation of e-commerce into everyday business operations. National model legislation has been developed to establish a level playing field for electronic commerce in every state.

The **Uniform Electronic Transactions Act** (UETA) provides legal recognition of contracts executed electronically between two agreeable parties. The legislation provides legal recognition of electronic records, electronic signatures, and electronic contracts without significantly changing existing state laws. UETA has been adopted in the State of California with several modifications. Pennsylvania and Virginia are also close to adopting the legislation. The ITB recommends the Maryland General Assembly enact UETA during the 2000 Session.

A much more comprehensive model law, the **Uniform Computer Information Transactions Act** (UCITA) sets forth a legal environment for the use and licensing of software programs. UCITA is particularly timely as Maryland and the rest of the country move to an ASP environment where software is more likely to be "rented" and accessible over the Internet, rather than being purchased and loaded into an individual's computer system. UCITA, however, is a lengthy and complex piece of legislation. The Maryland Attorney General has written a letter expressing concern about several aspects of UCITA. In light of these complexities, the ITB recommends that the Maryland legislature hold hearings on UCITA to determine its appropriateness to our State.

3. Promote the State's Emerging Application Services Provider Industry

The emerging ASP industry is a crucial economic force for growth. The market for these business services is expected to grow from $150 million to $2 billion over the next four years. Under *eMaryland*, the State will become the leader and a national model in the development and delivery of these hosted application services. The ITB recommends expansion of high-speed

fiber and wireless networks throughout the State and encouragement of a rich mix of business services to migrate onto those statewide networks with incentives and investment.

A.   Create a Statewide Application Services Provider Fund

The ITB recommends the State retarget information technology and venture capital resources to create a substantial ASP Fund to support the development and deployment of Business Services Applications over Network Maryland. This fund would support government and public education applications, the migration of existing applications onto Network Maryland and a new seed capital program exclusively for new hosted applications startups.

B.   Promote the Use of ASP technology for State government transactions and educational systems

4.   Leverage Maryland's Position as the Regional Logistics Hub

Maryland has a unique opportunity to capitalize on its strategic infrastructure assets like the BWI Airport and the Port of Baltimore. The State should network its core infrastructure players in real time to create faster throughput of goods and services and lowered statewide transaction costs.

A.   Create a business portal for the statewide logistics/distribution industry community

The proposed business portal will be capable of linking major local players (airport, port, rail, trucking, freight forwarder, shipper and regulatory/enforcement agency players) in real time communications/transactions with ultra-fast information transfer rates and extensive international links. A digital portal (a high-tech system of information exchange and logistics management), will allow Maryland to fully capitalize on its unique physical intermodal transportation infrastructure. It will create a coordinated mechanism to support e-commerce coupled with integrated transportation of physical goods and logistics management across all modes of transportation through Maryland ports of entry. The information exchange, coupled with an intermodal transport system, allows for the smooth flow of shipments from supplier to distribution to retail customer in the supply chain and will give Maryland a significant competitive advantage.

B.   Market and promote BWI warehouse district as a regional Internet distribution center for companies engaged in e-commerce that need distribution and delivery infrastructure

The Department of Transportation should provide a one-time marketing grant to the BWI Partnership to develop a scheme and produce appropriate literature and website changes. An e-marketing task force should be created with representatives from Maryland Department of Transportation (MDOT), Baltimore Washington International (BWI), Maryland Port Administration (the Port), Department of Budget and Economic Development (DBED), BWI partnership, county economic development authorities, commercial brokers, and others in the private sector to market Maryland's resources to e-commerce companies. The ITB

recommends that a $50,000 matching stipend be awarded to the BWI Partnership to develop marketing materials to reach the e-business audience.

5.   Develop a Portfolio of E-Business Initiatives

The State should focus more resources on meeting the needs of emerging e-commerce companies and promoting the growth of e-business.

A.   Establish a new seed capital program in TEDCO exclusively for Internet startup companies

In order to support the emergence of Maryland's entrepreneurs, accessibility to money is crucial. The Department of Business and Economic Development (DBED) operates the Challenge and Enterprise Investment programs which supply funds for emerging technology companies. While several Internet-based companies have been funded, the funding has been granted on account of proprietary technology that the company has developed or obtained the rights to. Many future virtual companies, however, will not necessarily have proprietary technologies and not be eligible for these funds.

The ITB believes that the new Maryland Science, Engineering, and Technology Development Corporation (TEDCO) could be an appropriate vehicle for steering startup funds to the Internet companies of the future. We suggest that $500,000 to $1 million in additional funding from the proceeds of the Enterprise program be reserved for those Internet startups identified by TEDCO.

B.   Designate buildings throughout the State to be used as Internet startup centers

Although Maryland has a number of state-supported small business incubators and several private incubators, a further need exists to steer startup Internet companies into facilities that house like companies. Internet startups look for the intellectual power, the camaraderie, strategic partners, and the employees of other similar companies. Clustering such companies helps to promote the "buzz" that companies and their employees are looking for when deciding on which locations make the most sense for starting a new Internet company. The location of such buildings or "wired districts," could be associated with the development and placement of the new statewide fiber optic backbone.

C.   To enhance the state's investment in small business incubators, the committee recommends that TEDCO focus on Internet startup companies by utilizing FY 2001 funds to provide technology development and marketing advice to incubator management and their Internet-based tenants

While there are a number of Internet startups in Maryland's state-supported and private small business incubators, we believe that enhanced funding and assistance to these companies in particular would send a strong message that Maryland is creating an entrepreneurial environment. We believe that TEDCO should provide enhanced technical and business development assistance to incubator managers who can then relay the information to their

Internet tenants, or to provide such assistance directly to the Internet incubator tenants. We believe this is consistent with TEDCO's mission and can be accomplished using existing funds.

D. **_Establish a virtual incubator for the Eastern Shore similar to the development of our Western Maryland Virtual Incubator_**

Many states, including Maryland, have small business incubators where technology-based companies can receive a variety of "value added" technology development, financial and business assistance services. Small business incubation has shown to markedly increase the survival and success rates of startups. Business incubators are perceived as important attributes and resources for states creating and promoting an entrepreneurial environment. The current inventory of business incubators, however, cannot meet the demand of the entrepreneurs who are looking to build new companies.

An innovative approach to building incubators is the online "virtual" incubator for Western Maryland – currently housed at www.MarylandB2B.com. The incubator will provide links to the finest business assistance sites in the nation, will provide discussion rooms so that small businesses can quickly find the answers to their questions, and will provide links and related information to attorneys, consultants, and accountants in Western Maryland. The ITB endorses this new approach to providing technology development, financial, and business assistance to Maryland's emerging companies and recommends that funding be provided to establish a similar virtual incubator for the Eastern Shore.

E. **_Refocus on development of telecommuting facilities through additional studies, financial incentives, and coalitions with developers and industrial real estate brokers_**

The ITB recommends the Maryland Departments of Transportation and Business and Economic Development establish a targeted program to convince Virginia companies to open telecommuting office in Maryland to reduce traffic congestion and reduce the commuting burdens for their Maryland workers. The program should assess the viability of large-scale telecommuting facilities to relieve traffic congestion.

F. **_Expand university outreach to emerging Internet-based companies_**

The Institute for Global Electronic Commerce at the University of Maryland Baltimore County (UMBC) was established several years ago to conduct training and outreach to businesses eager to engage in global electronic commerce. The Institute has just begun to fulfill its potential in terms of providing programs and initiatives to facilitate corporate entry into e-business. The University of Maryland Baltimore County has significant intellectual resources to assist small businesses in entering global electronic commerce. The ITB recommends that a matching grant of $100,000 be provided to the Institute exclusively dedicated to expanding outreach efforts to those Maryland companies not fully engaged in electronic business.

Electronic Government

The Information Technology Board believes that Maryland must continue to take aggressive steps to promote greater citizen access to government services, education, and commerce through the Internet and other electronic media. The State has made substantial progress through initiatives like the Maryland Electronic Capital (MEC), electronic business licensing, Net Weekend (wiring schools for the Internet), long distance learning projects, SAILOR, the Maryland Technology Showcase, and development of the statewide high-speed fiber backbone (Network Maryland). Still, more needs to be done. With the conclusion of the Y2K readiness programs, the State should now direct its focus and technology resources toward achieving universal citizen access to government and the Internet.

1. Establish Time Frame for Implementation of Electronic Government

Maryland has taken the first steps toward universal citizen access through MEC and initiatives like electronic motor vehicle and business licensing. MEC provides a single interface to government by coordinating and linking state agency and other public sector home pages on the Internet. State agencies have begun utilizing new technologies to allow citizens to enter requests for information and services electronically. Ultimately, every agency will make services available electronically and allow citizens to conduct complete business transactions 24 hours day, 7 days week from the home, office, or a public access point.

The ITB recommends that the State aggressively pursue universal citizen access to government and establish the following time line for agencies to make services available to the public over the Internet:

- **50% by 2002**
- **65% by 2003**
- **80% by 2004**

In addition, the ITB recommends that State government become a major user of *eMaryland* ASP services over Network Maryland.

2. Restructure the State Information Technology Board

The State Information Technology Board was created in 1993 to advise the Chief of Information Technology on the IT Master Plan and other information technology matters. Since 1995, the activities and responsibilities of the Information Technology Board have greatly expanded. Given its current duties and oversight responsibilities, the ITB would greatly benefit from additional private sector participation. The ITB recommends the Board be restructured to allow for greater participation by private sector individuals with expertise in various fields of technology.

Citizen Access and Education

In this knowledge-based economy, it is increasingly important that students have adequate technological skills to compete in the job market. The State must aggressively close the digital divide separating those citizens who have a working knowledge of and access to technology resources and those who do not. In particular, Internet training should become a life skill that begins at an early age.

1.   Increase Efforts to Promote Internet Training for both Teachers and Students in Maryland's Public Schools

Internet training should begin at an early age. Information technology skills are essential for every student's career development and for the State's economy as a whole. The ITB recommends that the State increase efforts to promote Internet training for both teachers and students in Maryland's public schools. Additionally, the State should accelerate efforts to increase the number of certified teachers in science and math.

2.   Require Information Technology Transfer as Part of Higher Education Planning and Curriculum

Maryland needs to ensure that researchers and private companies are not the only beneficiaries of information technology research in Maryland. Because undergraduate and graduate students are the region's future entrepreneurs, they must be exposed to Maryland's cutting-edge research at an early stage so that they can create commercial applications once research becomes commercially available. Accordingly, the State should actively encourage administrators and researchers to include current research as part of the information technology curriculum.

3.   Amend the Science and Technology Scholarship Program to Allow Companies and Research Institutions Involvement at Start

Businesses should be offered an opportunity to work with the Maryland Higher Education Commission to supplement the State's Tech Scholarship Program. Earlier involvement with the business community will provide additional resources for students, who should be extended internship opportunities with these businesses. In return, participating students will commit to work for a period of time with sponsoring business. The State should also consider increasing Science and Technology Scholarships to further entice students to enter science, engineering and other technology fields.

4.   Participate in the E-mail at Birth Project

The ITB examined how Maryland residents could be assigned an e-mail address almost at birth, which would be a permanent and constant email address, regardless of the Internet service that would be utilized. The U.S. Postal Service (USPS) intends to develop a role in some phase of e-commerce and the movement of documents and messages. Discussions have taken place to

assess the appropriateness of Maryland serving as a demonstration site for a USPS initiative aimed at assigning residents a permanent, life-long e-mail address.

The ITB recommends that a task force be established to work with the USPS to designate Maryland as a demonstration site for this innovate concept, and that task force members develop the details, logistics, and any associated costs with the USPS, its contractors and consultants.

Research and Emerging Technology

Maryland is poised to be a leader in emerging technologies. According to a recent survey, 60% of households in the region are connected to the Internet. The State's vast resources include:

- Nationally recognized research universities;
- Numerous federal research labs;
- An highly educated and skilled workforce;
- State government that uses technology to deliver many services;
- Deployment of technologies in K-12; and
- An excellent transportation system.

To help speed the development of emerging technologies, the ITB is making the following recommendations:

1.   **Build Partnerships between Federal Technology Resources, Academia, Government and Industry**

Information technology transfer from Maryland universities, colleges and research centers to private industry is critical to the growth of Maryland's economy for the next decade. The State's role in this process should include identifying Maryland as a premier location for information technology research, facilitating the transfer of technology from Maryland research centers to private companies and mandating researchers and administrators to educate and expose graduate and undergraduate students to this research.

2.   **Convene a Meeting of Area Federal Lab Directors**

The State should begin an outreach effort to the area federal lab directors to recognize their importance to Maryland. The meeting would open a dialogue with the federal labs and be a first step toward building partnerships with the State. Additionally, the ITB recommends that Maryland Public Television (MPT) consider producing a series of programs about the various federal labs in the State. These productions would inform the public about the functions of the labs and highlight their importance to the State.

3.   **Empower TEDCO to act as broker for matching players**

The State must aggressively promote Maryland research centers as locations where cutting-edge information technology research is conducted so that federal agencies and private industry will first turn to Maryland for their research projects. To this end TEDCO should: (1) identify federal agencies and private companies that fund research; (2) monitor the pipeline of these entities to identify targeted projects; and (3) promote Maryland research centers as the best candidates to participate in such projects. TEDCO should have a significant presence at trade shows to further promote Maryland research centers to the information technology community. Further, TEDCO should assist small technology businesses with grant writing to take advantage of available federal research and development advance technology awards.

4.   **Aggressively Market Maryland Technology Resources**

The State, through DBED, TEDCO and the universities, should aggressively market Maryland's technology resources to the region and the nation. A website should be developed to serve as a resource for anyone involved or interested in technology, including professionals, business developers, educators, researchers and students. The website should provide sufficient information and organizational profiles on technology-related research institutions, laboratories, organizations, corporations, businesses, and government agencies in the State. A section on this website should highlight the successes of Maryland individuals, institutions and organizations involved in technology research, with examples of positive results of technology transfer.

5.   **Provide Fiscal Support And Other Incentives for Researchers In Public Institutions and Technology Companies to Rapidly Exploit Potential Emerging Technologies for Commercial Application**

Once Maryland research centers acquire research projects, the State must assist in accelerating the commercialization of research so that Maryland companies have a competitive edge. The State can facilitate the commercialization of technology by reducing the regulatory barriers and by streamlining the administrative procedures for each research center. Just as the federal government created an incentive scenario under DARPA, TEDCO should create a financial incentive program that would encourage and expedite the movement of research and research applications toward commercialization and consumer applications.

6.   **Facilitate Venture Capital Investment for Emerging Technologies**

The Department of Business and Economic Development should expand its economic development assistance programs to make additional seed money available for technology start-up companies. Through the Enterprise Fund and TEDCO, the Department should reinvest the earnings from prior equity investments in emerging technology companies. Additionally, TEDCO should also coordinate with area technology councils to support their efforts in building angel networks and attracting investment firms to Maryland.

7.   Identify Strategies to Leverage the Concentration of Next Generation Internet Activities in Maryland

Next Generation Internet (NGI) is a project sponsored by the federal government to meet the rising problems with speed and accessibility in the increasingly crowded Internet. This project is specifically designed to address the requirements of the national research community and federal agencies. Internet 2 is a primarily university-driven project involving the collaboration of high-tech industry, government, and research and education networking organizations. Its purpose is also to enhance the capabilities of the broadband network and create new applications to meet the needs of the academic community.

Maryland stands uniquely poised for NGI leadership thanks to the research and development efforts of the University of Maryland College Park, Johns Hopkins University, and many federal laboratories. While the economic development opportunities are virtually limitless as the private sector gains access to Internet 2, it remains unclear how Maryland's leadership role can be leveraged to give Maryland companies an early competitive advantage. The ITB recommends that DBED develop a plan to identify private sector opportunities utilizing NGI and recommends action be undertaken to facilitate private sector utilization for commercial markets.

8.   Encourage the Use of Digital Signatures

To encourage the use of emerging Internet technologies, the State should do everything possible to ensure that citizens and businesses feel comfortable using the Internet in communications and transactions. The utilization of digital and other forms of electronic signatures is key to the expansion of e-business. The Office of the Secretary of State, therefore, should diligently monitor international and federal activities involving digital authentication standards, so that prompt action can be taken to remove any legal or procedural barriers in Maryland.

9.   Promote the Access to Information Technology Products and Services by Individuals with Disabilities

To promote access for all citizens, the State should provide incentives and encourage emerging technology businesses to develop IT products and services for people with disabilities. Incentives could also be granted for incubators to develop and launch IT products and services that make new IT accessible or to make existing IT more accessible. The State could also direct and provide funds for the Maryland Technology Assistance Program and Department of Rehabilitation Services to work with emerging IT companies and entrepreneurs, to help develop and test concepts and products for people with disabilities.

Health Care

Maryland is uniquely poised to take a leadership role in developing, implementing, and mainstreaming the use of the Internet within the health care industry. The goals of promoting healthcare applications on the Internet and improving the efficiency and effectiveness of Maryland's health care system will require a balance of patient privacy and confidentiality while facilitating appropriate access to information through electronic exchange. The ITB has identified three potential uses for Internet for health care:

- **Direct Consumer Sales**

Currently, consumers purchase medical equipment, supplies and prescription drugs from retail stores and may purchase some items by mail order. Companies are beginning to explore ways to use the Internet to sell healthcare products and services. This is an area that is expected to explode, as the capital costs are relatively low.

- **Business to Business Sales**

Physicians, hospitals, and other healthcare practitioners and facilities provide another direct sales opportunity for the Internet.

- **Health Care E-Business**

E-business refers here to moving business functions to the Internet, including the sale of healthcare coverage, claims adjudication, continuing medical education, as well as credentialling and licensing physicians and other healthcare practitioners. Because of the capital required to move to E-Business, analysts expect this transition to occur much more slowly.

The ITB's Health Care and the Internet Committee examined the following issues:

Insurance Operations

The use of electronic communication reduces the administrative cost of health services by eliminating redundant data entry and providing a more rapid means of transferring payments. The electronic dissemination of information allows health insurers to effectively communicate with enrollees regarding plan and treatment policies. In the next several years, Internet communications may replace existing private networks to transmit administrative information, such as health insurance claims. The Internet will also create opportunities to communicate directly with providers and patients. None of Maryland's larger insurance companies and HMOs currently sends or receives claims information via the Internet.

Telemedicine

Increasingly, the Internet is used for the transmission of x-ray images, sonograms, CAT scans and MRIs that are sent from the patient's hospital or clinic to the physician who may be located at home or another hospital. The U.S. Senate Commerce Subcommittee on Science, Technology and Space recently focused on the challenges of the technological development of telemedicine, including state requirements for interstate licensure. Several bills under consideration call for a report on telemedicine, including specific reviews of state licensure.

Public Health Use of the Internet

The success of public health is directly related to the ability to collect and disseminate information necessary to provide appropriate public health services, for monitoring the health status of our communities, and to educate the public regarding appropriate public health practices. The Internet provides a venue for health education to the general public and the health care community.

State and Federal Laws: Disclosure of Medical Information Under Maryland Law

Medical records law in Maryland primarily concerns the circumstances under which the custodian of the records may or must disclose those records to others. The rules regarding medical record disclosure can be categorized by the type of data encompassed by the rule; by the custodian of the record; by the requestor of the record; and by the conditions (both pre and post-release) that must be met for the disclosure to be authorized.

Recent Federal Action in this Area

As a result of federal legislation aimed at administrative simplification for health care transactions, the rules and standards for the electronic transfer of health information between health plans, health care providers, and clearinghouses are about to change in a major way. All health care institutions in Maryland, including state health agencies, will be affected by this mandatory federal program.

The federal Health Insurance Portability and Accountability Act (HIPAA) of 1996 became law in August 1996. The Department of Health and Human Services (DHHS) has been working on implementation of the HIPAA requirements for several years. During the last few months of 1999, final publication of several new transaction standards is expected and first publication of other draft standards is planned.

HIPAA will establish mandatory rules for some health care information activities, will constrain the ability of states to regulate in some areas, and will force all health care institutions to change the way that they collect, maintain, disclose, and protect health care data. The scope of the new requirements is sweeping. It is expected that HIPAA standards will pertain to the following:

- **Standards governing transactions and code sets**. These standards will require health care providers to use a single standard electronic format to bill for services. Health plans will be required to accept these standard electronic claims. Standards also cover other common transactions and the reporting of diagnoses and procedures. Health plans will be able to pay providers, authorize services, and coordinate benefits using one standard electronic format for each transaction. Employers who provide health insurance to workers will use a standard electronic format to enroll or disenroll employees and to make premium payments to health plans.

- The broadest of the HIPAA standards is the **security standard**. In August 1999, HHS proposed technical guidance and administrative requirements for those who use electronic health information and medical records of individuals. All health plans, health care providers, and health care clearinghouses that maintain or transmit health information electronically will be required to establish and maintain responsible and appropriate safeguards to ensure the integrity and confidentiality of the information. The security standard applies to all individual health information that is maintained or transmitted, whether or not the information is part of a HIPAA defined transaction. Other HIPAA standards only apply to HIPAA transactions.

- HIPAA also will change **identification numbering standards** for providers, health plans, employers, and, perhaps, individuals. Draft rules published in May included a mandatory national provider identification number. A new identification numbering system for health plans will likely be proposed by the end of 1999. An identification system for individuals is also required by HIPAA but proposals on this identifier have been delayed because of concerns about privacy. It is uncertain when HHS might propose a patient identifier. The HIPAA standards already proposed should be made final by the end of 1999. The effective dates are expected to fall sometime in 2002 so that the industry will have about two years to prepare.

- HIPAA also established a timetable for **health privacy rules**. The Secretary of HHS has published draft privacy rules for public comment that cover electronic health care transactions. HIPAA directs the Secretary of HHS to establish privacy rules that do not supersede contrary state laws that impose more stringent requirements. This means that states may eventually be able to maintain or establish strong privacy rules. However, implementation of any privacy regulations is several years away, and federal legislation remains under active consideration. Final rules are due to be in place shortly after the current 90 day comment period.

The HIPAA transaction standards will be mandatory for all health care transactions. The HIPAA security standards will be mandatory for anyone who maintains individual health care records.

The ITB makes the following recommendations with regard to health care and the Internet:

1. **Establish State-Recognized Standards to Assist in the Implementation of HIPPA for Both Internal Government Use and External Use by the Health Care Industry.**

    The State should consider providing limited assistance and resources to assist state and private sectors in the transition to HIPAA and related technology standards and practices. This may include the development and issuance of a "certificate of compliance" with the proscribed standards.

2. **Encourage the Application of External Audit Processes for Security Compliance and Peer Review of Websites with Corresponding Seals of Approval.**

3. **Promote Public Education that Includes the Value and Critical Use of Healthcare on the Internet and Awareness Education on Privacy and Confidentiality**.

4. **Encourage Training in Internet Communications and Privacy and Confidentiality for All Health Care Professionals Including Patient-Level Awareness Training that Adequately Addresses Concerns of All Stakeholders.**

5. **Establish a Task Force on Health Care and the Internet**

    The ITB recommends creation of a long-term, high-level task force to continue to oversee evolution of Internet-related health care activities with a limited specified focus to provide the necessary continuity and public oversight. The task force should assist public and private sectors to identify levels of expertise required to accomplish HIPAA compliance.

6. **Support the Development of an Internet-Based Medical Technology Industry in Maryland and the On-Going Development of Information Security and Confidentiality Standards within the Private Sector with Appropriate Links to Government**.

7. **Explore Long-Term Incentives for Partnerships with Related High Technology Firms with Outcome-Based Measurements that Assure Benefits to the Public.**

Internet User Privacy

Individuals using the Internet to obtain services from government or the private sector, to order goods, or simply to seek information, generate data documenting all aspects of their web visits as well as transactions that take place. While the gathering of this information offers the benefit of the ability to cater to specific consumer interests, there are inherent risks to personal privacy. The information collected by online marketers, for example, can be sold by vendors to third parties with whom the customer has no connection. Further, the vendor can not ask the customer's permission to share the information with others. Another concern is that while the user is viewing web pages, the computer may be "invisibly" transferring valuable data to the originating server.

It is little wonder then, that despite the exponential growth in the online marketplace, many consumers remain wary about participating. Since consumer confidence in the online marketplace is critical for its continuing growth, Maryland must promote an environment in which personal information is protected.

State of Maryland Privacy Principles

Fortunately, Maryland already has statutes for dealing with many computer issues. These statutes cover unauthorized access to computers, interception and disclosure of electronic communications and harassing or obscene e-mail. The statutes provide criminal penalties and may also provide civil remedies for those who are affected by violations. Additionally, the Maryland Consumer Protection Act provides both civil and criminal penalties for activities that are fraudulent or deceptive regardless of the medium used for the activity. Maryland has also adopted the Public Information Act (PIA). This Act generally provides for public access to public records but also protects from disclosure certain personal information collected by state or local government.

Maryland's core privacy principles have included the following concepts:

Relevance and Necessity. Privacy lost can seldom be restored. Information users, therefore, should consider the issue of privacy in designing information systems. Information gathered should be held for use pursuant only to current or already planned activities and should be subject to the test of relevancy and necessity. Personal information should not be held simply because the data may prove valuable at some future point. Finally, personal information that has served its purpose should be discarded as appropriate.

Fair Information Collection Procedures. Information may not be gathered through deceptive, secretive, fraudulent or unfair means or methods.

Notice. Any time personal information is gathered, a statement must be presented clearly articulating why the information is being gathered, what the information will be used for, and what steps will be taken to protect confidentiality, integrity, and data quality. Terms and

conditions of release, disclosure to third parties, and means under which data may be electronically transferred must be clearly delineated by the information gathering entity. A clear statement must be made as to whom the data can be disclosed and under what circumstances. Finally, notice should provide details as to any rights of redress.

Consent. Consent basically means providing the consumer with choice or options as to how personal information may be used, particularly as it relates to any use that goes beyond those necessary to complete the contemplated transaction. Thus, consent generally relates to secondary use or re-use of the information gathered. Any time personal information is gathered, the gatherer must provide the option to "opt in or out." The citizen must be allowed the opportunity to refuse to allow their personal information to be used in a manner inconsistent with the intent of the original transaction or reused in a manner not contemplated.

Access. Citizens must be offered the ability to review their personal records. The concept of access also includes the ability of the consumer to offer corrections to erroneous data.

Security/Integrity. Appropriate security measures must be instituted to ensure that personal information is protected from abuse, alteration, destruction, mishandling and unwarranted dissemination from both internal and external sources. These include both operational and technical measures. The operational measures include the adoption of sound data security policies and procedures within the organization, while technical measures would include such things as randomly generated passwords, secure servers and data encryption.

Enforcement. For the other core privacy principles to be effective, mechanisms for assuring compliance must be in place and must provide adequate recourse for the individual affected by non-compliance as well as a measured consequence for the responsible organization.

1.   **Enact Legislation Codifying the State of Maryland Privacy Principles and Update Data Security Policies for Government**

The ITB recommends legislation be enacted requiring State agencies adopt Maryland's Privacy Principles consistent with existing laws and agency mission. The agencies' privacy policies should be posted prominently on their websites. The ITB also recommends that Executive Order 01.01.01.1983.18 relating to Privacy and State Data System Security be updated to include relevant changes related to the conduct of State business via the Internet.

2.   **The Governance Body of NetWork.Maryland Adopt Contractual or Other Administrative Requirements that Would Require Entities that Utilize and Benefit from NetWork.Maryland to Abide by Maryland's Privacy Principles in the Conduct of Their Business on NetWork.Maryland**

3. **Maryland Businesses Operating on the Internet Voluntarily Adopt Maryland's Privacy Principles and that the Business Community Set Up and Manage an Organization that Would Certify Participating Businesses and Offer Education to Consumers.**

Organizations such as the Maryland Chamber of Commerce, the Better Business Bureau and the Maryland Association of Retailers should be encouraged to band together to form such a group. The Information Technology Board could "jump start" this effort by seeking public funds or private donations to provide seed money for outreach and for the organization and development of this entity.

Maryland companies should tell consumers in their website why information is being collected, what the information will be used for, how it will be protected, the consequences of providing or withholding information, and any recourse they may have**.**

Unsolicited Bulk E-Mail

Unlike postal mail, e-mail shifts the costs from the sender to the delivery agent and recipient. The cost is largely borne by the Internet Service Provide (ISP) who operates the mail server, and by the final recipient, who pays for access to the e-mail server, and whose time is spent downloading unwanted messages. Some Internet users pay for service on an hourly basis, so receiving and reviewing unsolicited commercial e-mail can literally cost them money. Even for users who pay for "unlimited access" there is a cost, since bulk e-mail ties up the resources of the ISP requiring them to increase their capacity, the cost of which is ultimately passed on to the consumer.

Many ISPs have reacted to bulk e-mail by providing software "filters" which screen out messages from known spammers. In response, spammers have learned to disguise the origin of their messages, by re-routing them through the mail server of an innocent third party. Another ploy for disguising spam is to forge the headers of messages, the information that identifies the originator of the message and the path it took to arrive at the end user. This can create a storm of protest similar to the re-routing ploy, again flooding an innocent party with complaints.

The Information Technology Board recommends enactment of legislation regulating unsolicited e-mail (Spamming).

The proposed legislation would:

- Prohibit any person without authorization from intentionally and willfully falsifying electronic mail header information or other Internet routing information;

- Provide that a person violating this law would be guilty of a misdemeanor and on conviction be subject to a fine and/or imprisonment;

- Prohibit the sale, distribution or possession of software which has as its principal purpose or functionality the ability to disguise and send bulk e-mail; and

- Provide for statutory liquidated damages for a private cause of action under the business article in which an ISP that incurs expense or other damages as the result of the initiation of an unauthorized, unsolicited bulk e-mail advertisement may seek injunctive relief, liquidated damages, or restitution.

The ITB further recommends that the governance body of NetWork.Maryland adopt contractual or other administrative requirements that would forbid any entity utilizing this state resource from knowingly and deliberately sending anonymous or disguised messages and further that all advertisements be clearly distinguishable as such.

Internet-Based Crime

The following is a summary of proposed legislation recommended by the ITB:

1. Crimes: Unauthorized Access to Computers; Interception of Communications

This proposed legislation adds unauthorized access to computers to the list of enumerated crimes found in Maryland's wiretap statute. This addition will enable law enforcement to retrieve crucial evidence in our fight against the rise in computer intrusion cases.

Of great concern to law enforcement is our inability to quickly seize evidence of electronic computer intrusions. In many of the computer intrusion cases coming to the attention of law enforcement the victim has no training and experience in identifying the intruder. By merely turning on the appropriate internal computer logs or by routing the intruder to another computer of little or no value, law enforcement can possibly identify those individuals responsible for the intrusion and safeguard valuable information and assets. However, under the current law if the victim did not activate internal logs or reroute electronic communication prior to notifying the police, then the suggestion by law enforcement to implement these procedures for the case in hand would be in violation of Maryland=s Wiretap statue.

2. Crimes: Unsolicited or Misleading Electronic Mail

This legislative proposal prohibits the sending of unsolicited commercial electronic mail when the receiver notifies the sender to remove their name from the mailing list. This proposal further prohibits the misrepresentation of any information in identifying the point of origin of commercial electronic mail. It also establishes the need for the sender to provide a means to remove a recipients name from a mailing list.

The law enforcement community receives countless complaints from the citizens they serve relating to the unsolicited receiving of commercial electronic mail messages usually with a

pornographic theme. In most instances the true identity of the sender is fraudulent. In addition no means are made available to the recipient to prevent these unsolicited messages from being received by both adults and children.

3.   Crimes: Computer Piracy

This proposed legislation revises criminal laws related to computer crimes including unauthorized access to computers or computer related equipment and software. Furthermore, this legislation would make it a crime to intentionally cause damage to computers and related equipment, such as servers and software. Under certain circumstances the bill provides for interception of communications related to computer crimes and intrusion cases.

Recent enhancements in computer hardware and software have resulted in an increase in computer-related crime. As a result computer intrusion case have increased. Individuals have been successful in breaking into computers and computer systems for the sole purpose of causing damage. Even employees with limited access to systems try to damage or enter restricted areas of computer files and cause changes detrimental to the individual or company.

4.   Child Pornography: Communication With a Minor

This legislative proposal will further clarify existing law as it relates to the unlawful communication with a minor for the purpose of engaging, seducing, soliciting, luring, or enticing a minor or someone believed to be a minor to engage in any sexual act.

The current statute does not adequately address an individual utilizing on line electronic communication for the purpose of soliciting unlawful sexual acts with a minor. There are differing opinions on the validity of the current language appearing in this section of law. The US Dept of Justice has indicated that Md statute presently in use today may not fully address the crime of online electronic communication with a minor for the purpose of engaging in unlawful sexual acts.

5.   Crimes: Destruction of Obscene Matter

This legislative proposal will allow law enforcement to seize electronic equipment, such as computers, used for distribution, manufacturing, and possession of child pornography. Also, It allows the seizure of the equipment used for communicating with a minor or someone believed to be a minor for the purpose of committing unlawful sexual acts. The court would be allowed to dispose of the seized property in a manner it deems appropriate i.e, sale, forfeited to a state agency. If the property is ordered to be sold the proceeds are to be paid to the Maryland Center for Missing Children for training and education purposes.