INFORMATION TECHNOLOGY AND

THE DEPARTMENT OF STATE:

PREPARING FOR THE DIPLOMATIC CHALLENGES

OF THE DIGITAL AGE

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ACKNOWLEDGMENTS

I spent the 1998-99 academic year as the State Department representative in the Fellows Program at the Weatherhead Center for International Affairs at Harvard University. As the core requirement of the program, each Fellow is expected to select a particular issue in the field of international relations, conduct research, and submit a paper at the end of the year.

As a State Department Foreign Service Officer writing about information technology and the conduct of foreign relations by my employing agency, I need to make the following disclaimer: Although I am at Harvard under the sponsorship of the U.S. Department of State, the comments and conclusions I will present in the paper are my own, and do not reflect the official position of the State Department.

In the course of my research, I received invaluable guidance and support from many individuals who have an interest in and knowledge about the Department of State, U.S. foreign policy, and the use of information technology in the conduct of foreign relations.

In Cambridge, I consulted with a number of professors from Harvard and the Fletcher School at Tufts, who gave freely of their time and counsel. I traveled to Washington to conduct formal interviews with federal government officials from the Department of State, Department of Defense, the Central Intelligence Agency, and the National Partnership for Reinventing Government (NPR). In Washington, I also met with officials from the Center for Strategic and International Studies (CSIS) and the Stimson Center.

I traveled to Ottawa, where I interviewed officials from the Canadian Department of Foreign Affairs and International Trade (DFAIT) and from the U.S. Embassy. On a separate trip, I interviewed Foreign Service personnel at U.S. diplomatic and consular posts in Paris, Lyon, Vienna, and Frankfurt. The State Department, as part of its ongoing study on "U.S. Presence Abroad," funded my travel outside of the United States. I am grateful for the Department's financial support as well as for their interest in my research and findings.

In Appendix A of this report, I will list the names and titles of all officials, in and out of government, whom I interviewed for this project. I wish to thank them for their time, interest and insights into the topic.

I would like to single out for special thanks those State Department and Harvard University officials who assisted me on numerous occasions throughout the academic year. I am indebted to them for their time, information, guidance and support:

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"THE INFORMATION REVOLUTION IS TRANSFORMING NOT ONLY THE INTIMACY AND SPEED OF COMMUNICATION, BUT THE VERY NATURE OF DIPLOMACY."

NEWT GINGRICH, March 1997, Beijing Foreign Affairs College

The digital revolution and the exploding use of the Internet and e-commerce, as well as the end of the Cold War, globalization, organizational reengineering, and the devolution of government, are all illustrative of the fundamental changes taking place in our economic, social and political institutions and in the very nature of governance and diplomacy. The U.S. Department of State is not immune to these trends, and is grappling with many challenges – foremost among them how best to adapt to uncertainty, changing national interests, and the training requirements of a knowledge-based organization.

Because of the digital revolution, now, more than ever, knowledge is power. Joseph Nye and William Owens, writing in <u>Foreign Affairs</u>, state that the "one country that can best lead the information revolution will be more powerful than any other. For the foreseeable future, that country is the U.S." They contend that "the U.S. dominates important communications and information processing technologies, and has an unparalleled ability to integrate complex information systems." They believe that "the information edge is equally important as a force multiplier of American diplomacy, including 'soft power' – the attraction of American democracy and free markets."[1]

This study, conducted during the 1998-99 academic year at Harvard University, takes a look at the foreign affairs landscape on the eve of the new millennium. Its

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[1] Joseph S. Nye Jr. and William A. Owens, "America's Information Edge," <u>Foreign Affairs</u> Mar. - Apr. 1996: Abstract.

emphasis is on examining the challenges the Department of State faces in applying updated information technology (IT) and related organizational restructuring to sustain its leadership in managing foreign affairs on behalf of the secretary of state and the president. The study is based on academic research at Harvard, close scrutiny of two reports done on State in the fall of 1998,[2] as well as the Department's own plan for improving its IT capabilities during the first five years of the 21st century.[3] It also includes findings from a large number of interviews with officials in Washington at the State Department, the Department of Defense, and the Central Intelligence Agency, and at overseas posts (Ottawa, Paris, Lyon, Vienna and Frankfurt).

THE STUDY'S PRINCIPAL FINDINGS:

- The Department of State is not keeping pace with the rapidly changing information technology capabilities of other U.S. government entities involved in foreign affairs, despite changes that are taking place (e.g., the creation of a Bureau of Information Resource Management; development of an IT plan for the new millennium, the integration of USIA and ACDA into State, and a critical look at overseas presence),
- Networks linking elements of an embassy abroad are largely weak, dysfunctional, or non-existent. Moreover, the U.S. government as a whole lacks a robust networking capability with external stakeholders (international organizations, state and local governments, and NGOs), who constitute a growing and powerful force in the conduct of foreign relations.
- Compared to other U.S. government agencies involved in foreign affairs, the State Department's IT security program is characterized by risk avoidance rather than risk management. This is impeding the full implementation of its own IT plan.
- State places insufficient value on lifelong learning, both for its information technology professionals and IT end-users. Increased resources and relevant training are vital for a knowledge-based organization in the digital age.
- The Department's IT plan does not adequately consider the organizational impact that enhanced IT capabilities will have on how the Department collects, evaluates and disseminates information in the future. Without extensive business process

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[2]Two think tanks, The Stimson Center and the Center for Strategic and International Studies (CSIS), both published reports in late 1998 very critical of State, making sweeping recommendations on how State should reorganize and update its IT capabilities in order to be more effective in the twenty-first century. I will review these reports and comment on their recommendations.

[3] Diplomacy for the 21st Century: Information Technology Goals for the First Five Years – Building the New Information Organization (Washington, D.C.: U.S. Department of State, 31 Dec. 1998).

reengineering, State's traditional hierarchical stovepipe organizational structure will be out of harmony with the new and enriched networking capabilities.

RECOMMENDATIONS:

- ***Ensure timely implementation of the Department's Strategic IT Plan***
  The IT plan will go a long way in closing the resources gap between State and other principal players in the conduct of foreign relations (e.g. DOD and the CIA). The Department needs to work closely with OMB, the White House and Congress to ensure that the necessary funding is made available to fulfill the IT vision that the Department has carefully crafted. Otherwise, the Department will not be able to retain its preeminence in managing foreign affairs and will become increasingly marginalized in favor of other agencies with better IT resources.

- ***Security***
  The Department will need to make the cultural shift from risk avoidance to risk management. In this process, it needs to exert its leadership internally as well as externally (e.g., by imposing stricter information systems security discipline on all users and IT managers, in order to ensure the integrity of its systems) as it takes the essential step to expand full Internet linkage in recognition of the essential nature of this capability both for public diplomacy and outreach to the private sector for operational purposes.

- ***Networking***
  The ALMA (A Logical Modernization Approach) upgrade to the OpenNet has created the infrastructure for more robust and reliable networking among U.S. government agencies operating at our posts abroad. State should take the lead in establishing overseas Local Area Networks (LANs) to take advantage of the capability now possible through ALMA. The networking paradigm also needs to be applied between the U.S. government and state and local governments, the media, non-governmental organizations (NGOs), and foreign governments and organizations. This is what is already going on elsewhere in the public and the private sectors.[4]

- ***Develop a Strategic Plan for Training***
  The organization of tomorrow involved at the forefront of foreign policy formulation and execution must be a knowledge-based organization that values lifelong learning. State needs to address this in a comprehensive fashion by bringing together the providers of training (the Bureau of Personnel and the Foreign Service Institute) with the stakeholders in the IT area to develop the equivalent of a training strategic vision to go along with the broad IT plan.

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[4] The Canadian government is years ahead of the U.S. government in its use of a common Intranet. The World Bank has made development of its network a high priority. Networking is the means the private sector is using to gain market sector competitive edge (cut costs, increase efficiency, and improve customer service).

- ***Engage in Business Process Reengineering to Complement IT Enhancements***
  With plans to improve its IT infrastructure and systems over the next five years (see Chapter III), State, as a knowledge-based organization, needs to match its enhanced IT capabilities with a fundamental reengineering of how it collects, evaluates and disseminates information. To this end, the Department, through committed and strong leadership, needs to forge a strategic partnership between the business/user side (mainly political and economic officers, who will benefit significantly from the new IT capabilities), and the provider/resource side (mainly information management, administrative and consular officers), who have the lion's share of IT knowledge and experience, and control of IT resources. External stakeholders must also participate.

  The experience from the private and public sectors suggests that successful reengineering, with broad and lasting organizational change, is achieved through strategically targeted pilot projects, with commitment and trust from senior management.[5] The key is empowering stakeholders. In this manner, DOD has undergone a "Revolution in Military Affairs" (RMA). It has been argued that the profound changes of the digital age and implications for the State Department in the conduct of foreign affairs, also call for a "Revolution in Diplomatic Affairs" (RDA). [6]

THE CHALLENGE:

Fundamentally, developing effective networks with stakeholders inside and outside of the Department of State, and reengineering work processes to fit the networking paradigm, are at the heart of what State's focus needs to be in the new millennium. Success in both efforts will require a committed and focused leadership, significant cultural change, and high-level support from the Congress and the executive branch of the U.S. government as a whole.

At stake not only is the retention of the State Department's preeminence as the lead agency for managing foreign policy for the president, but more critically, the ability of the U.S., as the world's leading technology power, to meet its strategic diplomatic objectives in the rapidly-changing and complex foreign affairs arena of the digital age.

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[5] See, for example, Michael Beer, Russell A. Eisenstat, and Bert Spector, The Critical Path to Corporate Renewal (Cambridge, MA: Harvard University Press, 1990).
[6] In the RAND publication, In Athena's Camp, John Arquilla and David Ronfeldt, the authors of the chapter "Looking Ahead, Preparing for Information-Age Conflict," call for a "Revolution in Diplomatic Affairs (RDA)," to match the RMA that has been underway since the 1980s.

INTRODUCTION

With the end of the Cold War in the early 1990s and as we approach the twenty-first century, both academicians and practitioners in the field of international relations are pondering what the foreign affairs landscape will look like in the next century. A key element in this analysis is the impact of information technology on the world in general,

> *The successful conduct of diplomacy depends on timely and accurate information, the tools to analyze this information, and a means to communicate and share it with others – both secure and open lines of communication are vital. Until recently, the Department has lagged behind the revolution that has transformed the ways information is managed, transmitted, shared, and used to enhance the performance of individuals, groups, and organizations.*
>
> *In short, the Department did not provide the Information Technology (IT) support required by its diplomats and foreign policy experts in the field and at headquarters. Its IT infrastructure, mired in obsolete and no longer effective technology, was crumbling.*
>
> **Department of State: Diplomacy for the 21st Century: Information Technology Goals for the First Five Years - December, 1998, page 1.**

and how this is accelerating changes in the way people and societies interact.

In the last six months, two prominent research organizations, the Center for Strategic and International Studies (CSIS)[7] and the Stimson Center[8] have published reports evaluating the State Department's preparedness to lead the management of foreign affairs into the next century. Both reports were critical of the State's management, calling on State to radically change its ways of doing business to prepare for the rise of what the Stimson Center calls "Dynamic Representation." A key deficiency cited in both reports is the inadequate technology available to State in the conduct of foreign affairs. The reports recommends extensive improvements

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[7] Center for Strategic and International Studies, Reinventing Diplomacy in the Information Age (Washington, D.C.: CSIS, 1998).
[8] The Henry L. Stimson Center, Equipped for the Future: Managing U.S. Foreign Affairs in the 21st Century (Washington, D.C.: The Stimson Center, 1998).

in information technology, along with innovation and broad organizational change, all of which CSIS and the Stimson Center believe will be necessary for the State Department to fulfill its leadership and management responsibilities effectively in the future.

At the same time, the State Department has put forward its own ambitious five-year Strategic Information Technology "vision" for the early years of the next millennium, 2001-2005, which the Chief Information Officer (CIO) of the Department calls "a synthesis of our collective experience and knowledge of industry trends and the Department's unique requirements. It forms a solid foundation for explaining to Congress our strategy for IT cost savings and for streamlining IT operations."[9]

Another key factor that will have an impact on overall State Department operations, culture and management, is the impending integration of the U.S. Information Agency (USIA) and the Arms Control and Disarmament Agency (ACDA) into State.

In this paper, I will review this rapidly changing landscape and examine it from an organizational impact point of view. The Department's organizational structure still largely reflects the Cold War configuration set in place after World War II. Decision-making still follows a strict hierarchical path, which in today's rapidly changing environment often impedes information flow and timely decision-making, frustrating stakeholders both within and outside the Department of State. IT savvy Foreign Service officers (FSOs) are already using the information technology presently available to create

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[9] Diplomacy for the 21st Century, Covering Memorandum, 16 Feb. 1999, 1.

separate, informal communications networks on an ad hoc basis. Over time, unless made part of an overriding strategic vision, this tends to weaken traditional bureaucratic boundaries. Unless the State Department recognizes the need for more robust networks and interconnectivity in the information age, its traditional preeminence as the leader of the foreign policy process will be increasingly marginalized.

In this context, State also needs to consider the organizational implications of its ambitious IT plan. It needs to draw on expertise and experience from other U.S. government entities involved in foreign affairs and national security. Both the CIA and the Department of Defense (DOD), for example, have already significantly upgraded IT capabilities and reorganized internally along IT-defined business process lines.

DOD, in particular, in carrying out the legislative mandate of the Goldwater-Nichols Act, has significantly reengineered organizational structures and programs, and created robust internal networks. Examples are also available from private sector multinational companies that have been incorporating state-of-the-art IT capabilities and the protection of their information into their business processes since the 1960s.

Control of "national security information" is still the central feature of the State Department's proprietary network. A cultural clash may ensue between State and its Bureaus of Public Diplomacy and Public Affairs; the new organizational units within State that will be created from the soon-to-be integrated USIA, which prides itself on its open communications with foreign audiences. Clearly, these dynamics will have major implications in the future on how the State Department conducts its business, how U.S. foreign policy interests are defined, and how decisions are made.

Through this paper, it is my intent to evaluate how State's vision and action plans compare to those already in place or planned in similar organizations in the federal government. In so doing, I will also draw upon lessons learned from the private sector. My emphasis will be on pointing out the organizational implications of the IT plan in terms of State's key operational activities in an environment increasingly dependent on effective and accessible networks.

The Department of State is already well behind the curve. Part of the problem is the lack of consistent funding by Congress, but a larger part of the problem, in my view, is State's culture – its inability to think beyond the "crisis du jour" and actually implement some of the changes recommended by the various studies over the years.

I proposed this research topic at the time I applied to the Fellows Program at the Weatherhead Center for International Affairs at Harvard. On my arrival at Harvard, I learned that two of my predecessors in the Fellows Program had written on the impact of information technology on the conduct of foreign relations. Stuart Eldon, from the United Kingdom, wrote the first paper, entitled "From Quill Pen to Computer," in 1994; Gunnar Klinga, from Sweden, wrote the second paper, entitled "The Digital Diplomat," in 1996. Both reports described the impact of information technology on the conduct of foreign relations at a time when foreign ministries were just beginning to realize the importance of the Internet on foreign policy objectives and operational effectiveness.

It is a reflection of the stunning rate of change in information technology capabilities, and its spread throughout the world, that many of the terms and processes mentioned in the two reports cited above, largely new and untried in foreign ministries in the early 1990s, are now rather mainstream.

The short-term challenge for the State Department, and foreign ministries in general, as I will point out in this paper, is to utilize more effectively the networking technology that is already available to diplomatic practitioners. Some initiatives are already underway, although mainly ad hoc in nature, rather than through a coordinated strategic effort led from the top.

Currently, three significant impediments to the wider use of existing IT capabilities by State Department personnel are:

- A lack of awareness of the information technology tools already at their disposal;
- Current security prohibitions against Internet interconnectivity that constrain the development of robust networks within the Foreign Affairs agencies, as well as with the public and non-Federal stakeholders; and
- Weak or non-existent interagency networks, especially at our posts abroad, which reinforce vertical hierarchical stovepipes and hinder lateral communications. [10]

Concurrent with the implementation of the Department's IT Plan, the Department will have to examine its implications for State's workforce. Specifically, the Department needs to focus on its training, recruitment and retention requirements as it integrates IT into the core functions of the Department as a knowledge-based organization.

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[10] Technically, the capability to establish and expand networks already exists. Nevertheless, the traditional bureaucratic tendency to withhold information rather than share it seems to impede the development of more robust and effective network structures within the U.S. government and at diplomatic posts abroad.

Research Methodology:

In addition to reviewing the literature on the organizational implications of information technology-driven change, I interviewed key decision-makers in the IT field at the Department of State, the U.S. Information Agency (USIA), CIA, and DOD. I sought their views on the current and future implications of IT changes on the core functions and structures of their organizations.

I also interviewed a large number of "endusers" of information technology in the State Department, both in Washington and at a few posts abroad. I asked them to comment on the effectiveness of the IT tools and systems at their disposal, the relevance and impact of the IT upgrades currently underway, and the nature of their interactions with IT support units.

My overall objective was to see if State's leadership, both in the IT area and in its top management, is reaching out to stakeholders, endusers and IT professionals alike, and using their input into how the work of the foreign service can best be done in the new millennium through effective use of IT resources and adaptive organizational changes.

Based on this research and analysis, I have drawn conclusions and made recommendations, which I hope the leadership in the State Department will consider, as State moves forward with the implementation of its IT vision for the twenty-first century.

I.   THE CONDUCT OF FOREIGN AFFAIRS IN THE 21ST CENTURY

It is hard to pick up a newspaper, scholarly journal or magazine, turn on the television or surf the world wide web without encountering a plethora of articles or news speculating about life in the twenty-first century. A dominant theme in the literature and electronic media in the developed world is the growing uncertainty and turmoil we are experiencing in our lives, individually and collectively, as the pace of change in the digital age accelerates. We know things are changing, but we are unsure, and indeed, a bit anxious, about what the future will look like as we are confronted, daily it seems, with yet additional technological innovations.

Not surprisingly, futurist authors Alvin and Heidi Toffler believe that we are already in the midst of the most profound changes in the history of mankind since the transition into the industrial age began over four hundred years ago. According to the Tofflers, we face "the deepest social upheaval and creative restructuring of all time."[11] The Tofflers call this emerging period the "Third Wave," and contend that we will see an accelerated rate of change that will dramatically transform the nature of governance, private enterprise, families, religion and values.

The revolutionary aspect of the digital age is *the technical capability to render meaningless the barriers of location and distance.* This is having an enormous impact on how we conduct our personal and professional lives and how individuals, organizations, businesses and governments interact with each other.   Information technology empowers

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[11] Alvin Toffler, Heidi Toffler, <u>Creating a New Civilization: The Politics of the Third Wave</u> (Atlanta: Turner, 1994) 19.

any individual with a computer, modem and an Internet address to engage with others on an equal footing – on a real time basis.

It is a technological reality that characterizes the age we live in. Just as the Vietnam War was dubbed the first television war, the Gulf War the first media war, the events unfolding in the Balkans in the spring of 1999 have already been termed the world's "first internet war," [12] as Kosovar refugees set up web sites from their refugee camps, and governments try to win the hearts and minds of the citizens of the global community through multilingual home pages.

With the end of the Cold War, the political and institutional relationships and structures that were developed over fifty years ago are also changing. It is clear that the foreign affairs landscape in the next century will be different – requiring existing institutions to adapt to changing threats and interests. The State Department, as the lead agency for the U.S. government for the conduct of foreign relations, will therefore need to apply a more effective mix of human, organizational, financial and information technology resources and structures to the changing foreign affairs arena, if it is to maximize its capability to serve our strategic interests in the twenty-first century.

> *Diplomacy is the art of advancing national interests through the sustained exchange of information among nations and peoples. Its purpose is to change attitudes and behavior. It is the practice of state-to-state persuasion.*
>
> Reinventing Diplomacy in the Information Age, Center for Strategic and International Studies (CSIS), October, 1998, page 34 (from "The Diplomat's Dictionary by Chas. W. Freeman, Jr. rev. ed. Washington: USIP Press, 1997).

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[12]Ellen Goodman, "Real Ties Being Destroyed During 'The Internet War'" International Herald Tribune 8 Apr. 1999: 11.

What are U.S. national interests and goals at century's end? The latest State

Department Strategic Plan lists seven U.S. national interests and strategic goals:

- National security – to ensure that local and regional instabilities do not threaten the U.S. and its allies;
- Economic prosperity – open markets, expand U.S. exports, promote global economic growth;
- American citizens and U.S. borders – assist Americans living and traveling abroad, control how non-citizens enter the U.S.;
- Law enforcement – minimize the impact of international crime on the U.S., reduce the entry of drugs into the country; reduce international terrorist attacks;
- Democracy – promote adherence to democratic principles and human rights;
- Humanitarian response – prevent or minimize impact of conflicts and natural disasters; and
- Global issues – focus on the global environment, world population growth, and human health. [13]

Within the U.S. government, the Department of State has always viewed itself as

the lead institution for the conduct of American diplomacy – its mission defined by the

role of the secretary of state as the president's principal foreign policy advisor. As such,

the State Department sees itself leading the overall U.S. government effort to use

diplomacy as an instrument of power, to maintain "effective international relationships,

and a principal means through which the United States defends its interests, responds to

crises, and achieves its international goals."[14]

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[13] Department of State, Strategic Plan for International Affairs (Washington, D.C., December, 1997) 27.
[14] Department of State, Strategic Plan 21.

The Department's Strategic Plan lists the following functions performed by Department personnel in carrying out U.S. foreign policy at home and abroad:

- Exercises policy leadership, broad interagency coordination, and management of resource allocation for the conduct of foreign relations;
- Leads representation of the United States overseas and advocates U.S. policies to foreign governments and international organizations;
- Coordinates, and provides support for, the international activities of U.S. agencies, official visits, and other diplomatic missions;
- Conducts negotiations, concludes agreements, and supports U.S. participation in international negotiations of all types;
- Coordinates and manages the U.S. government response to international crises of all types;
- Carries out public affairs and public diplomacy;
- Reports on and analyzes international issues of importance to the U.S. government;
- Assists U.S. business;
- Protects and assists American citizens living or traveling abroad;
- Adjudicates immigrant and nonimmigrant visas to enhance U.S. border security;
- Manages those international affairs programs and operations for which State has statutory responsibility; and
- Guarantees the diplomatic readiness of the U.S. government.[15]

Most of the time, these core diplomatic activities are linked to specific goals, which are reviewed and updated annually through the Bureau and Mission Performance Plan process.

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[15] Department of State, Strategic Plan 22.

Overseas, the ambassador reports to the president through the secretary of state. At a diplomatic post, the chief of mission has authority over all U.S. executive branch personnel, except for those under a U.S. area military commander. The chief of mission heads the Country Team, which is the principal coordinating body for all U.S. government agencies present at posts abroad. State, as the lead agency abroad, manages U.S. embassies, consulates and other diplomatic posts, and supports the international activities of the rest of the U.S. government.

This structure has provided the State Department and the U.S. government as a whole with a reasonably effective organizational framework for the conduct of foreign relations for much of the second half of the twentieth century. However, with the end of the Cold War, and the increase in the number of government agencies present overseas, this structure has grown increasingly unwieldy. As a result, State's preeminence in leading foreign affairs can no longer be taken for granted or assumed in the future by the Department.

The dramatic increase in overall executive branch government presence abroad presents a major challenge to State's leadership. A study by the General Accounting Office in 1994 shows that State's presence abroad, while largely unchanged in numerical terms, has actually shrunk from 44 per cent to 38 per cent of overall U.S. presence abroad in a ten-year period. [16] At the same time, the number of law enforcement officials operating abroad under the authority of the chief of mission, for example, has risen from by 94 per cent (Justice) and 21 per cent (Treasury). The expansion of the overseas

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[16] General Accounting office, <u>Overseas Presence: Staffing at U.S. Diplomatic Posts</u> (Washington, D.C.: December 1994).

Figure I.3: State, Other Foreign Affairs Agencies, and Nonforeign Affairs Agencies as a Percentage of All U.S. Direct Hires for U.S. Agencies Overseas
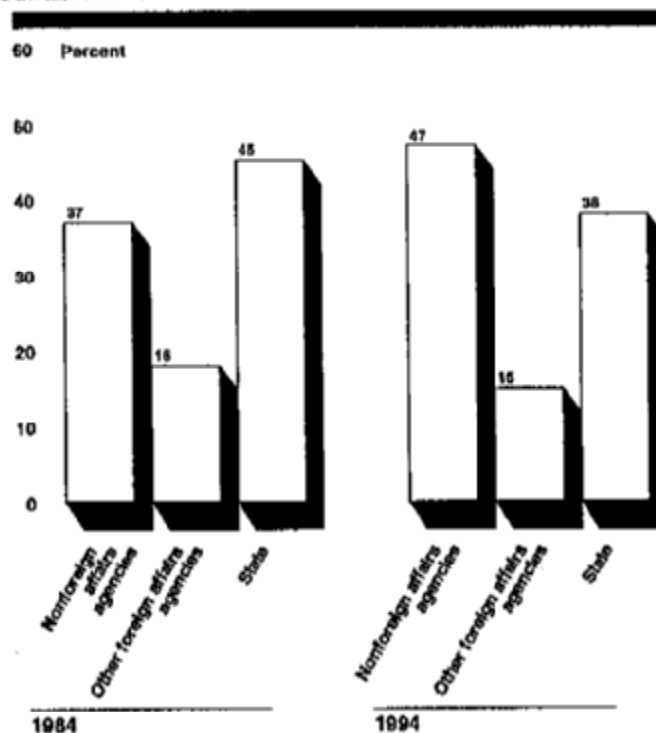
Note: Other foreign affairs agencies are FAS, USAID, US&FCS, USIA, and the Peace Corps. Nonforeign affairs agencies are DOD, Justice, Transportation, Treasury, Agriculture (excluding FAS), Commerce (excluding US&FCS), and other agencies.

Staffing Levels Increased in Nonforeign Affairs Agencies

Nonforeign affairs agencies accounted for the increased levels of U.S. direct hires overseas. In the last 10 years, the number of U.S. direct hires authorized for nonforeign affairs agencies overseas (excluding DOD) went from 1,578 to 2,265, an increase of nearly 44 percent, while the U.S. direct-hire staffing levels of foreign affairs agencies remained relatively constant. (See figs. I.4 and I.5.)

presence of non-foreign affairs agencies mainly reflects the increasing "globalization" of

U.S. national interests. The GAO report states:

> As a result, the functional scope of diplomatic posts has broadened, reflecting
> the diverse interests of U.S. domestic agencies in fields such as environmental
> protection, science and technology, energy, education, health, and transportation.
> Moreover, federal functions – including criminal law enforcement, customs,
> payment of veterans' and social security benefits, and immigration control – have
> contributed to the increased staffing in these areas overseas.[17]

Other trends in the international system that are taking place in the wake of the

end of the Cold War are:

- *Uncertainty* - although the Cold War was characterized by nuclear threat and the potential for conflict, it also provided a structure and predictability in the conduct of foreign relations. It was a bi-polar world, with the U.S. and the Soviet Union pitted against each other, and with the rest of the world falling into one or the other camps, or the non-aligned movement. Arguably, the rise of the Third World can be viewed as a "direct consequence of, and contributor to the structure and predictability of the Cold War world."[18]
- *Greater Complexity* - Along with growing uncertainty, the end of the Cold War has also led to greater complexity. Alliance systems collapsed, the definition of "neutrality" changed, and new nations, regional entities and non-governmental organizations (NGOs) emerged. Freed from the constraints of the Cold War, ethnic nationalism exploded, new conflicts arose, and the migration of peoples increased, all presenting challenges to the new international system.[19]
- *Greater Diffuseness of Power and Control* - With the end of the Cold War, the importance of other power centers, mainly the European Union and the Asia-Pacific region, increased. This has required the remaining superpower, the United States, to re-examine its own international orientation. The main players are no longer just the U.S. and the USSR. More nations are speaking out as legitimate stakeholders, and regional issues are taking on more importance for these players. "Nations large and small were faced with the fact that they had to take more responsibility for dealing with issues and managing conflicts in their near abroad."[20]

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[17] GAO, Overseas Presence 23.
[18] Maurice A. East and C. Edward Dillery, "The United States - the State Department's Post-Cold War Status," in Foreign Ministries: Change and Adaptation, ed. Brian Hocking (New York: St. Martin's, 1999) 226.
[19] East and Dillery 226-227.
[20] East and Dillery 227.

Clearly the "New World Order" proclaimed by George Bush at the end of the Cold War is anything but "orderly." What have we learned about the foreign affairs landscape in the last ten years that might be useful to plan for the challenges of the twenty-first century?

Writing in the September/October 1997 issue of Foreign Affairs, Anne-Marie Slaughter, a law professor at Harvard University, views George Bush's "New World Order" as a "chimera … the promise of 1945 fulfilled, a world in which international institutions, led by the United Nations, guaranteed international peace and security with the active support of the world's major powers."[21] Such a world of liberal internationalism never existed, Slaughter contends, rather it was an ideal that was never achieved. To imagine it happening after the end of the Cold War would require "a centralized rulemaking authority, a hierarchy of institutions, and universal membership."[22] However, nation-states remain unwilling to cede such authority to supranational bodies, such as the United Nations, the European Union or the World Trade Organization (WTO).

So, what *is* "The New World Order?" An alternative view to liberal internationalism, according to Jessica T. Mathews, also writing in Foreign Affairs, [23] is "the new medievalism," seen by Slaughter as a "a back-to-the-future model of the twenty-first century."[24] Proponents of this view predict the demise of the nation-state,

[21] Anne- Marie Slaughter, "The Real New World Order," Foreign Affairs Sept.-Oct. 1997: 183-227.
[22] Anne-Marie Slaughter 183.
[23] Jessica T. Mathews, "Power Shift," Foreign Affairs Jan.-Feb. 1997: 60-86.
[24] Anne-Marie Slaughter 183.

with an emphasis on the rising importance of nonstate actors, who have "multiple

allegiances and global reach."[25]

Central to Mathews' thesis is a transformation in organizational structure from

hierarchies to networks, from centralization to voluntary affiliation. Slaughter interprets

Mathew's position as follows:

> The engine of this transformation is the information technology revolution, a radically expanded communications capacity that empowers individuals and groups while diminishing traditional authority. The result is not world government, but global governance. If government denotes the formal exercise of power by established institutions, governance denotes cooperative problem solving by a changing and often uncertain cast. The result is a world order in which global governance networks link Microsoft, the Roman Catholic Church, and Amnesty International to the European Union, the United Nations, and Catalonia.[26]

Slaughter has an opposing view. She contends Matthews downplays the ability of

the nation-state to retain state power. While NGOs and nonstate players are growing in

number and influence, most prefer to work within existing national organizational

frameworks to achieve legal ends. Similarly, NGOs more frequently network with

governmental and non-governmental entities, regardless of geographic location, as a

means of applying political pressure "on the traditional levers of domestic politics."[27]

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[25] Anne-Marie Slaughter 183.
[26] Anne-Marie Slaughter 184.
[27] Anne-Marie Slaughter 184.

What Slaughter sees is the emergence of "A New World Order," where the state isn't disappearing, but is:

> disaggregating into its separate, functionally distinct parts. These parts – courts, regulatory agencies, executives, and even legislatures – are networking with their counterparts abroad, creating a dense web of relations that constitutes a new, transgovernmental order. Today's international problems – terrorism, organized crime, environmental degradation, money laundering, bank failure, and securities fraud – created and sustain these relations. Government institutions have formed networks of their own, ranging from the Basle Committee of Central Bankers to informal ties between law enforcement agencies to legal networks that make foreign judicial decisions more and more familiar. While political scientists Robert Keohane and Joseph Nye first observed its emergence in the 1970s, today transgovernmentalism is rapidly becoming the most widespread and effective mode of international governance. [28]

The politics of this new governance paradigm are complicated and emotional. It encompasses the rhetoric of a "new government for a new century," fears of the U.S. losing sovereignty in the name of internationalism, the current focus in the U.S. on "reinventing government," and on domestic issues rather than on international matters. Slaughter's answer is "transgovernmentalism," which she contends, can transcend all these problems. This sort of cooperation brings together stakeholders across nation-state boundaries who work on common solutions, which can then be implemented at the national level. According to Slaughter, "the transgovernmental alternative is fast, flexible, and effective." [29]

Slaughter offers as an example of transgovernmentalism in action with bipartisan appeal the State Department initiative "The New Transatlantic Agenda." Begun in 1991 under the Bush administration and developed further by Secretary of State Warren Christopher in 1995, this initiative defines the relationship between the United States and

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[28] Anne-Marie Slaughter 184.
[29] Anne-Marie Slaughter 192.

the EU. Cooperation is spelled out in areas such as opening markets, fighting terrorism,

drug trafficking, and infectious diseases. It cuts across governmental as well as

public/private lines, engaging "individuals through people-to-people exchanges and

expanded communication through the Internet."[30]

Anne-Marie Slaughter offers a very thought-provoking model for the future that

rests on the assumption that global information transactions will be far different than they

were before the digital age took root. That view is reflected as well in a core finding of

both the CSIS and Stimson Center reports: *The need for the State Department to broaden*

its outreach to other governmental entities, domestically as well as globally, to nation-

states, regional organizations, as well as to the NGO world.

Networking is the key, as is bureaucratic cultural change to allow government

entities to disaggregate into functional organizational structures to solve specific

problems. Other important elements are trust and professionalism, which transcend

nationality and culture.

> *At the heart of the process is information technology.* Slaughter concludes:

> Transgovernmentalism offers answers to the most important challenges facing advanced industrial countries: loss of regulatory power with economic globalization, perceptions of a "democratic deficit" as international institutions step in to fill the regulatory gap, and the difficulties of engaging nondemocratic states. Moreover, it provides a powerful alternative to a liberal internationalism that has reached its limits and to a new medievalism that, like the old Marxism, sees the state slowly fading away. The new medievalists are right to emphasize the dawn of a new era, in which information technology will transform the globe. But government networks are government for the information age. They offer the world a blueprint for the international architecture of the twenty-first century. [31]

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[30] Anne-Marie Slaughter 192.
[31] Anne-Marie Slaughter 197.

With that thought in mind, I will turn now to an overview of the digital

revolution, and what it portends for the Department of State in the twenty-first century.

II.   THE DIGITAL REVOLUTION AND ORGANIZATIONAL CHANGE

The era we are in, characterized by rapid technological change, uncertainty, social and political turmoil and upheaval, and shifting and often conflicting trends and values, is being called "the digital age." It is viewed by many as a "revolution," given the disruption level that characterizes it, the strains on existing institutions of governance, and the uncertainty as to how it will all turn out.

I have used the term "digital revolution." I could have just as easily called it "the information age," the "post-information age," the "knowledge revolution," or the "network revolution." All of these refer in one way or the other to the essential element – information technology – and to the degree to which its growing capabilities are impacting on our lives, individually and collectively, economically and socially.

In this section of the paper, I will explore the digital revolution, its key features and impacts, and speculate on the trends we can expect in the coming years. I will also review the related phenomena of innovation and reengineering in the context of changes in public and private sector organizations in the last twenty years, and how these changes are, in many ways, being enabled and fueled by growing technological capabilities.

Finally, I will take a look at how these structural changes in organizations and advances in information technology are leading us to expanding networked interactions. Following this overview of these interrelated factors, I will turn my attention to the Department of State, its information resource management programs and strategies, and evaluate how these changes will impact on State's operations and effectiveness in the twenty-first century.

THE DIGITAL REVOLUTION

How is information technology changing the social order so dramatically that the Tofflers believe we are in a new era of human history, only the third major shift (the "Third Wave") since man first left the cave and began to form social units for the collective good? What sets apart the information (or digital) age from the industrial age (the "Second Wave")?[32] How should our institutional structures, which are products of the Second Wave, adapt to the transition to the digital age? And, of course, what should the State Department be thinking about as it implements its ambitious information technology plan for the twenty-first century?

Technology and change go hand-in-hand. It is not my intention to take a position in favor of or against "technological determinism." Rather, I want to underscore how the digital age is significant in terms of the impact the technology is having on how we organize ourselves economically, socially and politically. It is the unique and unprecedented technological capability of the digital age that sets it apart from the industrial age.

But how exactly is the digital age different? Certainly the technologies introduced during the industrial age – for example the printing press, the steam engine, electricity, the railroad, and air travel were significant factors in the profound social, political and economic changes that have taken place over the past four hundred years. While the digital age is characterized by similar changes, according to the Tofflers and others, they are so profound as to warrant classification as a totally new age.

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[32] Alvin Toffler and Heidi Toffler 19.

The main features that set the digital revolution apart from the industrial revolution are:

- Digital technology enables all forms of data – voice, data, and video to be reduced to "bits, or strings of just zeros and ones." [33] It therefore makes it possible to "store, transmit, and receive vast quantities of data, virtually instantaneously, to and from anywhere in the world." [34]
- The technology allows users to interact with each other with no regard to time or distance.
- Digital technology allows for the creation of "virtual networks" that ignore permanent boundaries.
- It allows for legitimate stakeholders in any particular issue to come together for a common purpose and then dissipate. [35]
- Computing power doubles every eighteen months. Known as "Moore's Law," named after Gordon Moore, then the head of research at Fairchild Semiconductor Corp., who first hypothesized it in 1965. (Moore went on to start Intel Corp., the world's richest chipmaker. While he steered Intel to the pinnacle of high technology, "it's kind of funny that Moore's Law is what I'm best known for," says Moore, who is now Intel's chairman emeritus. "It was just a relatively simple observation.") [36]

Moore's observation in 1965, with some variation, has remained fairly constant over the last thirty-four years, doubling every eighteen months or so. This year, says Moore, the industry will produce about one quintillion transistors. "That's at least as many as all the ants on earth," Moore points out.[37]

Also remaining valid is the corollary to Moore's Law: The cost of a given amount of computer power drops by 50% every eighteen months. This spurs market growth with the introduction of new applications that were too costly to produce before. This is also

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[33] Robert E. Litan and William A. Niskanen, Going Digital (Washington, D.C.: Brookings Institution Press and Cato Institute, 1998) 1.

[34] Litan and Niskanen 1.

[35] Jeffrey Eisenach, Professor at the John F. Kennedy School of Government at Harvard University, in his course "Government in the 21st Century," referred to the Sun Microsystems website at the 1994 Winter Olympics. At its height, it represented the largest distribution of information in the world. It was created for a particular purpose, accessible by a worldwide audience on a real-time basis, and at the end of the Games, was disbanded.

[36] Otis Post, "Gordon Moore's Crystal Ball," Business Week 23 Jun. 1997.
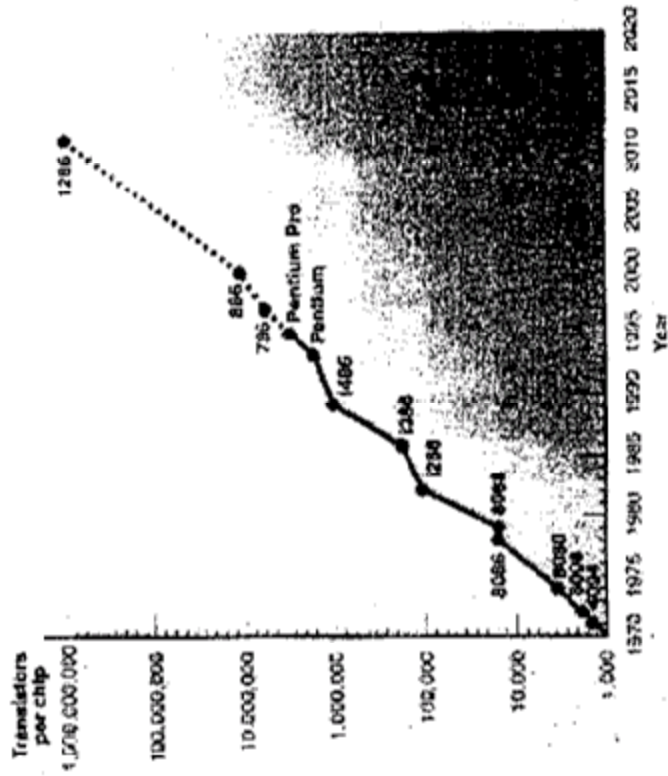
[37] Post, Business Week.

MOORE'S LAW

- "Every 18 months for the foreseeable future chip density (computing power) will double while the cost remains constant."

- Gary Moore, Intel Founder

Moore's Law

Source: Adapted from Otis Port, Andy Reinbach, Gary McWilliams, and Steven V. Brull, "The Silicon Age: It's Just Dawning," Business Week, 9 December 1996

why the unsophisticated computer chips found in today's household appliances are more

powerful than those that powered the supercomputers of twenty years ago.

Typically, today's videocassette recorders have a half-dozen microprocessors,

most cars now have at least a couple of dozen, and some luxury cars have three times that

number. "A robot that cleans your house seems a reasonable thing to expect," says

Moore. "And I'm sure that silicon intelligence is going to evolve eventually to the point

where it'll get harder and harder to tell intelligent systems from human beings."[38]

Another phenomenon that characterizes technological change in general, but that

is not necessarily unique to the digital age, is "The Law of Disruption," which measures

the degree of turmoil caused by change. Technology change is significantly more

disruptive than political, business or social change.[39] Its impact is even more profound, of

course, under the influence of Moore's Law.

These phenomena are part and parcel of what Alvin and Heidi Toffler call "The

Third Wave."[40] According to the Tofflers, it began in the mid-1950s, when, in the United

States, for the first time since the advent of the industrial age ("The Second Wave,"

according to the Tofflers' scheme), the percentage of service (i.e., "knowledge") workers

surpassed that of industrial workers. By the late 1990s, it had become clear that the

preponderance of wealth in the United States now stemmed from the creation of

"knowledge" products. No longer is U.S. wealth connected with the industrial

behemoths of the Industrial Age – U.S. Steel, General Motors, or the railroads, but rather

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[38] Post, <u>Business Week</u>.

[39] Larry Downes and Chunka Mui developed the "Law of Disruption." They are co-authors of <u>Unleashing the Killer App: Digital Strategies for Market Dominance</u> (Cambridge: Harvard Business School Press, 1998). Downes is an independent consultant and senior lecturer at Northwestern University. Mui is a partner with Diamond Technology Partners.

[40] Alvin Toffler and Heidi Toffler 19.

Law of Disruption - Downes & Mui

The Law of Disruption

Change

Technology Change

Social Change

Business Change

Political Change

Time
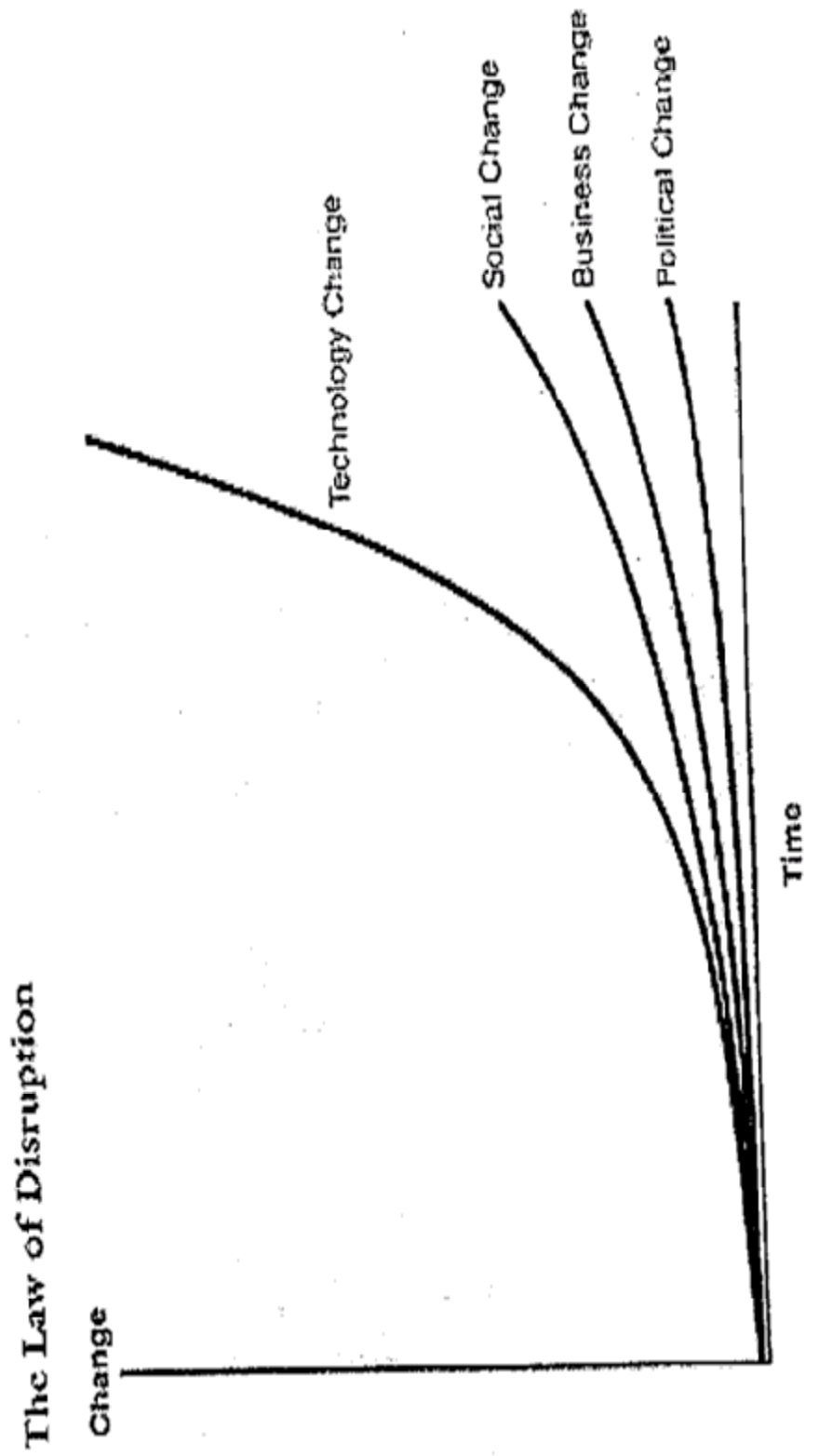
with Microsoft, IBM, AT&T, Dell, and Oracle. Knowledge is becoming the most prized

commodity.

Another term and concept that is part of the digital age is "cyberspace," which

Esther Dyson, George Gilder, George Keyworth, and Alvin Toffler define as:

> More ecosystem than machine, cyberspace is a bioelectronic environment that is
> literally universal: It exists everywhere there are telephone wires, coaxial cables,
> fiber-optic lines or electromagnetic waves. This environment is "inhabited" by
> knowledge, including incorrect ideas, existing in electronic form. It is connected
> to the physical environment by portals, which allow people to see what's inside,
> to put knowledge in, to alter it, and to take knowledge out. Some of these portals
> are one-way (e.g. television receivers and television transmitters); others are two-
> way (e.g. telephones, computer modems). [41]

As such, the authors argue, we are already beyond the "Information Age." In fact,

they find the term "Information Superhighway" misleading and restrictive.[42]

Dyson et al make the following distinctions between "The Information

Superhighway" and "Cyberspace": [43]

Information Superhighway	Cyberspace
Limited Matter	Unlimited Knowledge
Centralized	Decentralized
Moving on a grid	Moving in space
Government ownership	A vast array of ownerships
Bureaucracy	Empowerment
Efficient but not hospitable	Hospitable if you customize it
Withstand the elements	Flow, float and fine-tune
Unions and contractors	Associations and volunteers
Liberation from First Wave	Liberation from Second Wave
Culmination of Second Wave	Riding the Third Wave

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[41] Esther Dyson, George Gilder, George Keyworth, and Alvin Toffler, "Cyberspace and the American Dream, A Magna Carta for the Knowledge Age." Progress and Freedom Foundation (22 Aug. 1994): Online. Internet. 4 Jun. 1999.

[42] The term "Information Superhighway," of course, is said to have been coined by Vice President Al Gore, first used to promote The High Performance Computing Act of 1990, authored by then-Senator Gore.

[43] Dyson, Gilder, Keyworth, and Toffler.

The authors contend that the highway analogy is misleading and simply wrong. Information is completely different from tangible goods. It can be reproduced at almost no cost – so that (in theory) every individual can access the entire output. Furthermore, the path is ubiquitous, very unlike a "highway."

The authors contend that the implications of cyberspace for economics, the means of production, access to markets, privacy, and governance, are enormous. As they put it:

> Cyberspace is the land of knowledge, and the exploration of that land can be a civilization's truest, highest calling. The opportunity is now before us to empower every person to pursue that calling in his or her own way. The challenge is as daunting as the opportunity is great. The Third Wave has profound implications for the nature and meaning of property, of the marketplace, of community and of individual freedom. As it emerges, it shapes new codes of behavior that move each organism and institution – family, neighborhood, church group, company, government, nation – inexorably beyond standardization and centralization, as well as beyond the materialist's obsession with energy, money and control.
>
> Turning the economics of mass-production inside out, new information technologies are driving the financial costs of diversity – both product and personal – down toward zero, "demassifying" our institutions and our culture. Accelerating demassification creates the potential for vastly increased human freedom.
>
> It also spells the death of the central institutional paradigm of modern life, the bureaucratic organization. (Governments, including the American government, are the last great redoubt of bureaucratic power on the face of the planet, and for them the coming change will be profound and probably traumatic.)[44]

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[44] Dyson, Gilder, Keyworth, and Toffler.

What does this tell us about where we are heading? Jeffrey Eisenach, teaching at

the John F. Kennedy School of Government at Harvard University, sees the following

major changes as continuing characteristics of "The Digital Age":

- Everything is becoming "digital". Communication and duplication are no longer media specific (multifunctionality – combination copiers/fax machines/computers). Hence massive new data-processing leading to greater manipulation of data – also known as "Convergence."
- Semi-conductor to microprocessor: Moore's Law; price/performance ratio down by 50 per cent every 18 months; trend will continue and fuel innovation and market growth.
- Host computer to client/server computer: "the network becomes the computer"; from mainframe to networks; considerable organizational/institutional impact.
- New Bandwidth: WWW likely to be transformed by greater bandwidth and reliable clear real-time video (i.e. instant global video libraries).
- "Information appliances": more windows into cyberspace - relates to "Convergence."
- Multimedia: cyberspace starting to resemble "Meetspace." [45]

These are the principal elements of the digital revolution. They are most evident

in the United States and Canada (Finland and France are also leading countries among

plugged-in and connected nations), but the digital revolution is clearly spreading not only

in the developed world, but also in the developing world. The tensions will continue, the

Tofflers suggest, between Second Wave economic, political and social institutions, and

those that fit the Third Wave paradigm. The transition, they suggest, will be a bumpy

one. This clearly has implications for the State Department and its ability to manage

foreign relations in the twenty-first century.

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[45] Jeffrey Eisenach, 9 Apr. 1999.

I will turn now to the last group of topics in this section on revolution: innovation, reengineering and restructuring of organizations and institutions. These inter-related dynamics are already evident throughout much of the private sector in the United States, and to a growing extent in the public sector as well. In this, it is more prevalent at the state and local levels than at the federal. Moreover, the State Department is just only beginning to participate in these profound adaptive adjustments.

INNOVATION, REENGINEERING AND REINVENTING GOVERNMENT

Since the mid 1980s, the United States began to reclaim its competitive edge in world markets through massive downsizing and reengineering. In this, the engine of change and growth was the application of cutting-edge technology. With some time lag, the same phenomenon then hit the public sectors in the U.S., Canada, Western Europe, Australia and New Zealand almost simultaneously.

In 1993, the Clinton Administration, early in its first term, introduced the Government Performance Results Act (GPRA), which was passed by Congress. Its bureaucratic offspring, the National Partnership for Reinventing Government (NPR), remains active, with ongoing and strong support from Vice President Gore.

The vice president is an ardent spokesman for government reinvention, and touts the success of GPRA and the NPR, based again, largely on information technology. It is no coincidence that the vice president, in a moment of historic overstatement, even took credit for the invention of the Internet. [46]

In January, 1999, highlighting the importance the Clinton Administration gives to the innovation effort, the White House sponsored a "Global Forum on Reinventing Government," which brought together representatives from the U.S. and other nations, as well as officials from international organizations, the Ford Foundation, Harvard, and the

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[46] "During my service in the United States Congress, I took the initiative in creating the Internet," Gore said in an interview with Wolf Blitzer on CNN on March 9, 1999, when asked to cite accomplishments that separate him from another Democratic presidential hopeful, former Sen. Bill Bradley of New Jersey.

private sector. To underscore the importance of this effort, President Clinton delivered the opening address.[47]

But what exactly is meant by *innovation,* and what led to this focus on it? In her course, "Innovation in the Public Sector," Professor Elaine Kamarck of Harvard's John F. Kennedy School of Government defines innovation as "any reasonable and significant change in the way an organization runs, operates, or manages its mission."[48]

The current focus on innovation has its origins in the 1970s.[49] The seeds of change were planted in the U.S., Canada, Great Britain, Australia, and New Zealand, countries where the economic situation was largely characterized by stagflation (high unemployment and inflation) – a dynamic that was counter to the Keynesian model. There was a growing unhappiness with government. There was a growing distrust, particularly in the U.S., in the aftermath of the Vietnam War.

In the 1980s, incoming politicians in these countries heaped blame on the career bureaucracy for their nations' ills (particularly President Reagan in the U.S., Prime Minister Thatcher in Great Britain, and Prime Minister Mulrooney in Canada). The bureaucracy itself became a political issue.

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[47] January 15, 1999, remarks by President Bill Clinton to the "Global Forum on Reinventing Government," delivered at the State Department. The White House, Office of the Press Secretary. Online. Internet.

[48] Elaine Kamarck, John F. Kennedy School of Government, Harvard University, "Innovation in the Public Sector," Class Notes, 4 Feb. 1999.

[49] This overview of the historical developments that led to the innovations in the public sector we are seeing today in the United States and elsewhere comes from my notes from Professor Kamarck's course at the John F. Kennedy School of Government at Harvard, Spring semester 1999. She drew her lecture material from a number of texts, among them: Alan A. Altshuler and Robert D. Behn, Innovation in American Government (Washington DC: Brookings, 1997), David Osborne and Peter Plastrik, Banishing Bureaucracy (Reading MA: Addison-Wesley, 1997), and Donald Kettl, Patricia Ingraham, Ronald Sanders and Constance Horner, Civil Service Reform: Building a Government that Works (Washington DC: Brookings, 1996).

Radical reform followed in New Zealand. A Labour Government undertook a massive restructuring of the state, characterized by privatization. The aim was to put government on a business basis by increasing accountability and citizen satisfaction. The government made a clear distinction between what it deemed "core" government functions, and those that could be contracted out. Overall, New Zealand's innovative fervor surpassed those of all other countries, as the government engaged in sweeping reforms and ambitious reengineering.

In the same timeframe, more widespread innovation and process reengineering was taking place in the private sector. IBM changed its top/down hierarchies, GE restructured, and Ma Bell was split up into regional phone companies. The model was no longer "bigger is better."

The second wave of innovation and government reform took place in the developing world. At that time, the developing world began a process of engaging in sweeping reform movements, with many factors in common. The World Bank identified the following catalysts for innovation in government:[50]

- An Economic Crisis - Historically, a big driver to spur innovation.
- Global Economic Competitive Pressures - While the world's economic system moved toward globalization, the political system remained based on the nation-state – creating a growing dysfunctionality. Keynesian behavior no longer fits when economic behavior is independent of states. Capital flows are global, government is local, bounded.
- Democratization (Establishment or Preservation of same).
- The Technology Revolution -This is changing the substance of government. Cyberterrorism is a growing national security threat, and it can come from non-state as well as state-sponsored sources. Information technology allows government to do things differently. Government no longer needs to be bound by traditional hierarchical layers. Work can be "monitored" at a distance. Hierarchies in government are moving toward the corporate model of lower-level empowerment.

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[50] Elaine Kamarck, 4 Feb. 1999.

- Performance Deficits (Real or Perceived).
- Marketization - With the end of the Cold War and the "triumph" of capitalism, market place economics predominate. The free market provides a better command and control system. Can some of its strong characteristics be applied to government? What incentives does the market provide to the government for innovation?

What are we seeing today in the public sector? State and local governments are more active than the federal sector in innovating processes and reengineering their bureaucratic structures. Oregon and Pennsylvania have won the innovations prizes given out by the Ford Foundation and the John F. Kennedy School of Government at Harvard University for their efforts to streamline functions and to enhance citizen input into the budget process. Indianapolis and St. Paul, Minnesota, have also been cited for innovations that fundamentally redefined the nature of governance. At the federal level, the Department of Housing and Urban Development and the U.S. Forest Service have won the Ford Foundation awards.

Case Study Example: The Department of Defense's Atlantic Command in Norfolk [51]

The Atlantic Command in Norfolk is often cited for its innovation efforts. In 1995, the ACOM began an effort "to transform a hidebound military bureaucracy into a new age, knowledge-based organization, nimble on its feet and buzzing with energy." It was a daunting task to streamline an organization that divided up its 1,100 personnel into eight directorates managing joint military operations for the Navy, Air Force, Army, and Marine Corps. The need to reform was evident: an organization that depended on timely dissemination and analysis of information was almost paralyzed – information flow was almost "inert." The head (CINC) of the Atlantic military region started the innovation effort, so it had high-level support and backing.

How did they accomplish their innovation objectives? The CINC brought in a seasoned officer to head the effort. The initial focus was finding a means to break down barriers across the stovepipes to stimulate sharing of expertise and intelligence. A pilot study group was formed. The proposed solution: A rich interactive ACOM Intranet that could be meshed with the existing Windows-based system already used for email. Security wasn't an issue, because all the systems were already classified. The Intranet could be linked to other Defense secure systems (such as SIPRNet).

The Intranet started out small, but within a few months was getting 50,000 hits a day. The enhanced information sharing enabled by the Intranet eventually broke down barriers between units. It changed informal communications dynamics as well. The Intranet's main payoff was the availability of information almost simultaneously to everyone. Instead of waiting until the information was "released" according to the military chain of command, the Intranet made it available much faster, and without reference to the user's rank. Efficiency soared, as did morale.

Based on ACOM's success, the European Command created a similar system. The Maritime Center in Nova Scotia, ACOM's Canadian counterpart, also has sent observers to take a look at the ACOM Intranet and its benefits.

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[51] Jay Finegan, "Joining Forces," <u>CIO Magazine</u> 1 Dec. 1997.

What leads to innovation? I have already mentioned the economic, technological, and political trends of the 1970s and 1980s that led to the current movement to innovate in the public sector. A key-determining factor seems to be organizational crisis. This is certainly the case in many of the private sector innovations that have taken place over the past twenty years. Drawing on the private sector model, there is growing pressure for the public sector to "measure" its performance gains. No longer does the public accept the level of inefficiency that is inherent in bureaucratic monopolies. The current reforms in the IRS, for example, can be traced in good measure to the long history of disregard for any service-oriented attitude on the part of that agency.

Nonetheless, the public sector, by its very nature, is slow to change. Professor Kamarck identifies six stages of change in the public sector:[52]

- Stage One: Attack Stage - Government is the problem.
- Stage Two: Cut the Bureaucracy - Too much money, too many programs.
- Stage Three: Realize that actions taken in stages one and two didn't solve the problem.
- Stage Four: Talk to the Bureaucracy.
- Stage Five: Design System Reforms.
- Stage Six: Implement Changes.

The National Partnership for Reinventing Government (NPR) was formed by the Clinton Administration to oversee the innovation efforts for the federal government that were legislated through the Government Performance and Results Act of 1993 (GPRA). Essentially, GPRA was designed to establish a means for strategic planning and performance measurement in the federal government. It was to ferret out waste and inefficiency in federal programs, stop the decline in confidence in government by

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[52] Elaine Kamarck, Class Notes, 16 Feb. 1999.

American citizens, address vital public needs, and force federal managers to better articulate their program goals and measure performance.

GPRA also mandated the initiation of pilot projects, where it would be possible to measure outcomes against goals, and use these pilot successes as models throughout the government. Emphasis was to be on service delivery and quality. Also sought was more rational congressional oversight and improved internal management of the federal government.

Under GPRA, each federal agency was to prepare a comprehensive mission statement covering the major functions and operations of the agency; general goals and objectives, including outcome-related goals and objectives; as well as a description of how the goals and objectives were to be achieved.

At the State Department, innovation efforts under GPRA have included the extensive reorganization plan that will go into effect to abolish the U.S. Information Agency (USIA) and the Arms Control and Disarmament Agency (ACDA) and integrate their personnel and functions into State. This is the most sweeping innovation since the revamping of the administrative support framework in the mid-1990s (from FAAS – Foreign Affairs Administrative Support, to ICASS – International Cooperative Administrative Support System).

There have been other innovations, primarily focused on customer service, which have been implemented through pilot projects in Consular Affairs (passport services), business facilitation and Diplomatic Security. Of the thirty-four recommendations in the initial 1993 review, most have been implemented; of those that remain outstanding, most require enabling legislation. A key unresolved recommendation was to give the chief of

mission broader management authority over all agencies operating out of an embassy. This requires congressional action, which to date has not been finalized.

The State Department's plan to improve its information technology programs and capabilities is definitely a significant effort. Nevertheless, I don't believe it meets Elaine Kamarck's standard of a true innovation, which would require the IT initiatives to be accompanied by strategic planning on workforce management, business processes, and interagency coordination and networking. While some efforts are underway in this regard, based on my research and interviews, I did not find any evidence that these core issues are being addressed in any comprehensive manner.

This did not surprise me. Change comes slowly at State. James Q. Wilson characterizes State as an example of a government agency that has not traditionally placed a high value on management.[53] Graham Allison and Peter Szanton list fourteen separate internal or external studies of the Department between 1949 and 1975, all calling for management reforms to improve Department operations.[54] They contend, however, that little reform has actually occurred.

Nonetheless, I remain an optimist. While domestic support for a robust diplomatic presence abroad remains low, I believe the seeds of meaningful change at State have been sown. The reengineering revolution, which swept through the private sector fifteen years ago, is now firmly entrenched at the state and local levels in the U.S. and is expanding in the federal sector as well. The value of education and an IT-savvy workforce in a

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[53] James Q. Wilson, Bureaucracy (N.P.: Basic Books, 1989) 94.
[54] Graham Allison and Peter Szanton, Remaking Foreign Policy: The Organizational Connection (New York: Basic Books, 1976) 121.

knowledge- based economy is a top priority for the vice president, and will certainly be a high-profile issue in the next presidential campaign, especially if Al Gore heads the Democratic ticket. Congress is making more funds available for State. Finally, the tragic bombings of our embassies in East Africa may change domestic perceptions for State over the long-term.

The last of the changes taking place related to information technology that I want to review is networking and the development of the knowledge-based organization. How they change the ways organizations work and people interact will have profound implications for the future effectiveness of the State Department.

NETWORKING AND STRUCTURE FOR A KNOWLEDGED-BASED ORGANIZATION

The U.S. Institute of Peace sponsored a conference in 1997 entitled "Virtual Diplomacy: The Global Communications Revolution and International Conflict Management." Its purpose was to bring together academics and practitioners in the field of international affairs to "explore the role of new information and communications technologies in the conduct of international relations, particularly how they affect international conflict management and resolution."[55]

The premise underlying the conference agenda was that the information revolution is transforming the dynamics of international relations. The agenda included discussion sessions on how IT is impacting on institutional structures and operational effectiveness in the field. The digital age provides the technological capability to rapidly collect, process and disseminate information, without regard to time or distance. The challenge for all stakeholders in conducting all aspects of foreign relations in the twenty-first century is transforming networks and institutional processes to allow this information to flow freely, efficiently, and reach intended audiences. Effective virtual diplomacy is only as good as the participants and their institutions, be they nation-states, international agencies, military forces, NGO's, religious institutions or the press.

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[55] U.S. Institute of Peace, Conference Home Page, <http://www.usip.org> Online. Internet.

ROBUST NETWORKS ARE AN ESSENTIAL COMPONENT IN AN EFFECTIVE KNOWLEDGE-BASED ORGANIZATION

The State Department has put forward an ambitious plan to improve its IT capabilities for the twenty-first century. It is based on providing the Foreign Service with state-of-the-art hardware; off-the-shelf software, featuring a standardized suite (Microsoft Office); and an expectation that research and development will allow for the unclassified system to be tied in securely with the Internet. Nevertheless, this plan doesn't go far enough.

Gary Vaughn of AID, speaking to the State Department's Open Forum on January 19, 1999, quoted the Canadian Foreign Minister, Gordon Smith, who said of virtual diplomacy in 1997: "Only about 10 per cent of the challenge of the IT revolution for diplomacy is a technical one; the other 90 per cent lies below the surface in an organization's culture, human resource priorities and operating procedures." [56]

The State Department isn't the only government player in the foreign affairs arena. In fact, as I indicated earlier, its presence overseas is shrinking vis-à-vis the other agencies of the U.S. government (particularly the military and the law enforcement agencies) who are establishing a growing presence abroad.

The NPR report on the State Department recommended that the chief of mission assume greater operational control and authority over all agencies at embassies abroad. Unfortunately, Congress has yet to enact the legislation that would allow the ambassador to make managerial decisions that would enhance overseas operations, particularly in the information systems area.

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[56] Gary Vaughn, "Diplomacy and Development for an On-Line World," (Open Forum, Department of State, Washington, D.C., 19 Jan. 1999) 6.

In the wake of the bombings in East Africa in August 1998, a blue ribbon panel recommended that the U.S. government as a whole improve the ability of embassies abroad to network internally among all agencies present at the post.[57] It should be noted in this regard that, while the concept of an U.S. government-wide email system has existed since the early 1990s, with established standards of interconnectivity, the system is far from being implemented.[58]

WHAT VALUE DOES A NETWORK HAVE?

Earlier in this paper, I explained Moore's Law and its significance for the growth of the Internet and the pervasive impact of information technology on change. With regard to understanding the impact of networks established with information technology, another "law" that is at play is Metcalfe's Law, which states, "the value of a network is equivalent to the square of the number of nodes. In other words, as networks grow, the utility of being connected to the network not only grows, but does so exponentially." [59]

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[57] Commerce Business Daily [Posted in CBDNet on May 27, 1999]: The Overseas Presence Advisory Panel was established to analyze the current organization and operation of the overseas offices of the United States government. The Department of State serves as the host organization at these overseas offices to a number of representatives of various government organizations to support the conduct of foreign policy. The Panel believes that the foreign affairs mission of the U.S. government can be strengthened through the improved operation of its foreign offices by the application of information technologies to increase the effectiveness of the interaction of the members of the FAC [Foreign Affairs Community] at a specific location. Specifically, the panel is interested in exploring the use of information technology to:
· Support the location specific service requirements for each participating FAC agency;
· Support the member organization specific service requirements for each participating FAC agency;
· Improve interaction among Foreign Affairs Community members; and,
· Promote the localized public diplomacy functions at each foreign location including interaction with foreign government organizations, the business community and the public.
[58] "Government-wide Email Requirements" <http://WWW.FED.GOV> Online Internet 24 Jan. 1998.
[59] Kevin Werbach, "Digital Tornado: The Internet and Telecommunications Policy," An OPP Working Paper Series (Washington, D.C.: Federal Communications Commission Office of Plans and Policy, March 1997) 6.

METCALFE'S LAW

- "As each user is added to a network the value of the network increases exponentially."
  – Robert Metcalfe, Founder of the Ethernet and 3COM Corp.

Metcalfe's Law

Utility

$Utility = Users^2$

Users
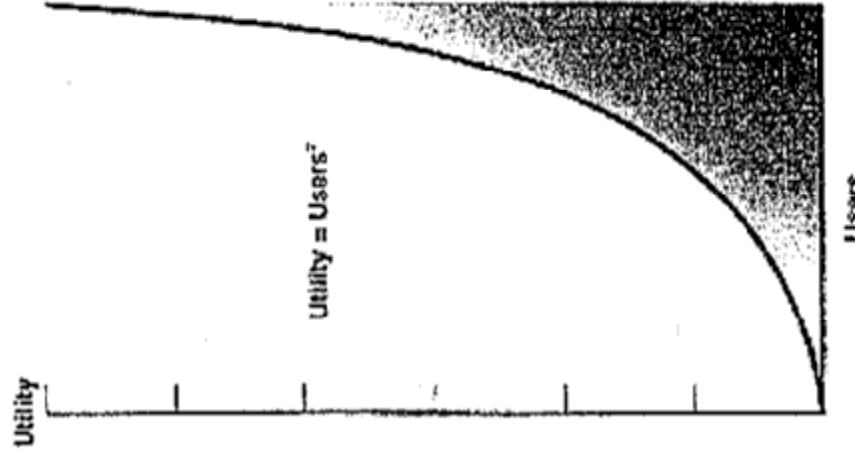
In connection with my research, I traveled to Ottawa, Paris and Vienna, and interviewed a wide range of embassy foreign service officers, information management officials, and non-State agency representatives. Networking capabilities at all these posts were primitive and dysfunctional. Furthermore, non-State agencies were largely disinterested in contributing financially to create a more robust local network that would tie them in more closely with the State upgraded unclassified network (called "ALMA" – A Logical Modernization Approach).

It is more than a question of money – the organizational dynamics were such that the State entities were clamoring for interconnectivity, while the non-State entities actually preferred to be "out of reach." This further dilutes the Country Team concept, which one officer in Paris said was now "more theology than reality."

State has two challenges in this regard:

- Developing a robust network architecture to enhance its ability to communicate internally and within the U.S. government in a secure and efficient networked manner, and
- Expanding the digital capability to reach out and bring in the other stakeholders who are more and more actively participating in the conduct of foreign relations.

It is more than a systems architecture challenge; it requires a fundamental rethinking and transformation of:

- The role of the State Department and its interaction with other government agencies in the conduct of foreign relations;
- The role and authority of the chief of mission overseas; and
- State Department culture, which currently is uncomfortable with information sharing.

It is evident, as Anne-Marie Slaughter and the Tofflers have pointed out, that the nature of government and the boundaries between governmental and nongovernmental

institutions are blurring. The conduct of diplomatic relations also is part of this transition – information communications technology (ICT) "permits the 'de-nationalization' of information structures. Diplomacy (is moving) away from a state-centered paradigm. [It] gains new importance as an art of communication and information."[60]

ADAPTATION AND CHANGE IN A KNOWLEDGE-BASED ORGANIZATION

How can the State Department plan for a more effective network as it implements its IT plan? The introduction of effective networks cannot be analyzed without looking at the process of organizational adaptation and change. While the State IT plan addresses the first capability, it largely ignores the organizational aspect.

State isn't unique in neglecting to focus on this interrelationship. The Canadian Department of Foreign Affairs and International Trade (DFAIT), despite the Canadian Foreign Minister's insights on the organizational impact of IT change (see page 40), is now just beginning to look at the work force and work process implications of the introduction of a very rich and interactive Intranet, which the Canadian federal government as a whole developed and implemented as part of a comprehensive federal government infrastructure plan. [61]

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[60] Viktor Mayer-Schoenberger, John F. Kennedy School of Government, Presentation to the Harvard Information Infrastructure Project, "Virtual Diplomacy: The End of Traditional State-to-State Interaction?" 26 Apr. 1999.
[61] Interview with Lucie Edwards, Canadian Department of Foreign Affairs and International Trade (DFAIT), Ottawa, 22 Mar. 1999.

Nevertheless, for some time there has been recognition of the need to link networking development with business process reengineering and organizational change. The U.S. Information Agency, in 1996, as a member of the "Foreign Affairs Interagency Information Resources Management Group" (FAIIG), sponsored a conference on "Developing a Strategy for Integrating Technology Support at Overseas Missions." [62] It was the first attempt to organize an event of this nature for the foreign affairs agencies. One of the objectives behind the conference was to seek standards for intra-post communications at our embassies abroad, so that various components of the mission could work more closely together than they have in the past. The conference concept paper called for an end to the "Washington-centric stovepipe paradigm,"[63] through an effort to link technology solutions with effective infrastructures to "ensure that the technology would be used cost-effectively and consistently." The concept was called: "Integrated Mission Support."[64] Working groups were formed and recommendations made. While the conference concept was relevant and compelling, I found no evidence almost three years later, of substantial progress having been made to realize the networking vision articulated at the conference.

Implementing change in any organization is a complex process. Certainly the history of efforts to "change" the State Department has not been filled with many success stories. The current changes taking place through the reorganization of State through the integration of USIA and ACDA, stems from a congressional mandate, rather than

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[62] Notes from Interview with Daniel Campbell, Director, Office of Management and Technology, U.S. Information Agency. Washington, D.C.: 29 Jan. 1999.
[63] Daniel Campbell interview.
[64] Daniel Campbell interview.

something State proposed on its own. This was also the route for change at the Department of Defense in the 1980s through the passage of the Goldwater-Nichols Act.

What is "reengineering?" It is more than innovation. It is more than redoing the organizational chart. Jerry Mechling of the John F. Kennedy School of Government at Harvard, provides this definition: "Real reengineering is characterized by a fundamental redesign of the work process involved in producing a product or service, rapid and large-scale performance improvements in the process being redesigned, and, often, the aggressive use of information technologies."[65]

Recent studies tell us that there are critical elements for success necessary to be present in efforts to reengineer organizations. Without them, the efforts appear to be critically flawed, even when supported by top management.[66] Among these, formal organizational structure and systems are apparently the last things an organization should change when seeking renewal – not the first, as many managers assume.

The Beer et al text shows that organizations should start revitalization efforts by targeting small, isolated, peripheral operations, not large, central, core operations. Moreover, the authors found that it is not essential that top management consistently practice what it preaches in the early stages of renewal, although such action is undoubtedly helpful.

In the corporate world, renewal through enhanced use of IT and reengineering has resulted in:

> A reduction on the exclusive reliance on the authority of management, on rules and procedures, and on strict and narrow divisions of work. Instead, employees at all levels are involved in decision making; teamwork is encouraged among

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[65] Jerry Mechling, "Reengineering Government: Is There a 'There' There?" <u>Public Productivity and Management Review</u>. Vol. 18, no. 2. Winter 1994. 189-190.
[66] Beer, Eisenstat and Spector 2.

functions, business units, union and management; information concerning performance and the competitive environment is shared and communicated throughout the organization; and responsibility and accountability are pushed far down the hierarchy.

These changes are resulting in a flatter, less hierarchical, and more flexible organization. They empower employees to take initiative in reducing costs, improving quality, and responding to customer needs. In turn, this new organization demands different patterns of management and employee commitment plus a redefinition of the corporation's culture. Such changes are fundamental and they never occur easily.[67]

The need for change in the corporate world (which is now spreading through the public sector) stems from the changing nature of the external environment. In more stable times, traditional organizational arrangements (e.g., hierarchical structures and top-down decision making) worked well and kept American firms competitive. This is no longer the case. In the corporate world:

Simultaneous demand for high quality, low cost, and product innovation require a new type of task-driven organization. For effective functioning, higher levels of coordination and teamwork across functions, borders, business units, organizational levels, will be needed. Higher levels of employee commitment and competence will be required at all levels.[68]

The experience of the corporate world shows that successful efforts at reengineering and adaptation require top management's support and overall guidance, but the efforts themselves need to begin in small organizational units. Success in fitting processes to IT capabilities can therefore spread to other units. Of course, the IT architecture must be designed for such flexibility.

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[67] Beer, Eisenstat, and Spector 2.
[68] Beer, Eisenstat, and Spector 6.

Another key concept is "task alignment." In a successful change effort, the critical path for task completion is studied. Participants look at work at the lowest level of complexity and how it relates to other stakeholders. Task alignment created through a critical path is necessary to increase coordination as well as commitment and competence.

In the corporate world, reengineering to retain a competitive edge is essential. I contend it is essential for the State Department to do the same. It is losing its "competitive edge" to other players who see themselves as having legitimate roles to play in the conduct of foreign relations. Closed systems, a culture of secrecy, and a lack of networking capability, all done in the name of "protecting" information and retaining prerogatives of power and control, have actually had the opposite effect – other stakeholders, rather than rely on State as the leader and coordinator, take on the functions themselves and promote their legitimacy with the NSC and the president. It promotes a culture of separatism and intragovernmental competition, rather than fostering a climate of coordination, collaboration and cooperation, with State firmly at the helm.

At the same time, State needs to recognize when it should shed some of its functions as no longer being part of the core mission. This is taking place in the administrative area, as State contracts out for many IT support functions, financial services, travel, and facilities maintenance. More efficiency could be gained through development of common databases that could be shared through an effective network.

Why does organizational change succeed along the critical path described above? When the objective of revitalization is the development of the organization's human resources, rather than reinforcement of hierarchical command and control, the

organization's members will develop a consensus that the benefits of change outweigh the risks; that they are trusted by their leadership to initiate and coordinate with less control from above.   In the corporate world, survival of the unit is often at stake.

In the public sector, faced with elimination, the Information Bureau of USIA radically reengineered its processes and as a result was able to maintain its mission focus, fulfill its mission objectives, with fewer staff and a lower budget.

Organizational change occurs when behavior changes. Imposing a structure on a unit will not change behavior easily. Giving ownership to staff members to understand and adapt their tasks to new realities will change their behavior.   Beers et al claim that:

> Task alignment is effective, programmatic change is not. Behavior change comes first. After behavior is changed, then attitudes and knowledge will change. Behavior changes through changed roles individuals play in the organization. The means for changing the behavior of many interdependent people is to change the network of interdependent roles.[69]

The provision of upgraded IT hardware and software in and of itself is not enough. The organization needs a partnership of change leaders – line managers, IT, human resources, and top management – in order for meaningful organizational change to occur and spread and become part of the new organizational "culture." State can learn from this model and harness its benefits.

Some changes have occurred, due to the initiatives of IT-savvy FSOs, supportive supervisors, mission requirements, and crises. A good example is "Relief Web," which

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[69] Beer, Eisenstadt, and Spector 61.

brings together public and private sector organizations that need to share information during natural disasters and humanitarian crises. The Bureau of European Affairs supported the development of a special office in Frankfurt to bring together systems officers from all over Europe, so they could share applications and IT ideas and concepts. As a result, many administrative applications are being run out of merged databases, and officers feel more empowered.[70]

I found another example of the State Department using a modern network-based approach to diplomacy on my trip to Europe in April – the American Presence Post (APP), which State had just opened up in Lyon, France. I had learned about the concept before my trip, and arranged to talk with Ambassador Rohatyn in Paris about his initiative before I traveled to Lyon to see it firsthand.

The APP concept calls for a number of one-person posts to be established around France, in regional centers with a high level of international business activity. Ambassador Rohatyn observed on his arrival in Paris that the U.S. mission to France consisted of a very large embassy but very few consulates; and the consulates were quite small. He lobbied very hard with Congress and the Department to reopen the post in Lyon, which State had closed in 1992 in order to save funds. He proposed that the post be reopened with only one officer, who would operate outside the normal State Department communications system. This would be cost-effective and allow the post to be opened quickly. The Congress and the Department agreed, and the post opened in

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[70] Interview with Sherril Pavin, Coordinator, AESOP Office, American Consulate General, Frankfurt, Germany, 14 Apr. 1999.

January 1999, with Secretary Albright appearing to cut the ribbon in a ceremony with the Mayor of Lyon.[71]

On my visit to Lyon, I met with the Consul and together we held a working lunch with two French officials – the Chef de Cabinet of the Mayor, and a representative from the Chamber of Commerce. Both were very enthusiastic about the reopening of the post, pointing out that there were several hundred U.S. firms operating in the area. They said that Lyon was developing regional ties that spread to neighboring countries, as are many other cities in France and throughout Europe. In Lyon's case, they had strong links with Milan, Turin, Geneva, Barcelona and Manchester. Moreover, France was recognizing the importance of regional centers for economic growth, and in a break from tradition, the government in Paris was including the regional centers in its economic strategic planning.

The post itself was largely self-sufficient. Its link to the outside world was a phone line, a FAX machine, and a computer with a modem and an Internet Service Provider (ISP). The Consul was able to carry out his responsibilities to facilitate links between French and U.S. business interests. He believed quite strongly that reestablishment of the U.S. presence in Lyon, even a small one, made a significant difference in bringing interested parties together.

 In my view, the concept of the American Presence Post is the twenty-first century version of nineteenth century diplomacy, when nation states often would have one-person outposts every fifty miles or so, to handle a range of diplomatic and consular matters. Today, in an era of globalization enabled by technology, these new small posts can be established at relatively little cost to provide local and leveraged connections with growing regional economic centers.

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[71] Interview with Ambassador Felix Rohatyn, American Ambassador to France. Paris: 7 Apr. 1999.

Potentially the most valuable change has occurred in the Department's annual "Mission Performance Planning" process. Adopted in the early 1990s, this is an exercise carried out by every mission around the world, as well as every bureau in the Department in Washington, to set goals and priorities for the near and long-term future. Due to the initiative coming out of the Office of Resources, Plans and Policy, the exercise this year is mostly web-based, on the Department's fledgling Intranet. All reports are available on line and can be submitted electronically. It just might be the crack in the "Maginot Line" of the senior leadership of the Department, who, with few exceptions, operate entirely in the classified system, and have expressed little interest in being connected to the internal unclassified system, yet alone to the Internet.[72]

However, I did not have the impression from my numerous interviews that anyone in State was looking at this from a broad organizational perspective and encouraging other pilot projects. The capabilities of IT at State are rapidly moving well beyond the housekeeping function. State needs to look at the implications of this new capability, at the security impediments to its full utilization and networking with other legitimate stakeholders (to include stakeholders who are only accessible through the Internet), and plan for the task alignment reengineering that will be required for the new networking paradigm as a reality of the digital age.

I found another example of the value of networks at the World Bank. In 1996, the World Bank created a network called "Communities of Practice," in order "to mobilize global knowledge from inside and outside the organization to solve local development

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[72] Interview with Todd Greentree, Senior Advisor, Office of Resources, Plans and Policy, Department of State. Washington, D.C.: 10 May 1999.

problems."[73] The network provides direct access to the bank's know-how by government foundations, NGOs, private sector firms, judicial bodies and other actors, who are the bank's partners in the field of development. This allows the bank to be both a storehouse of knowledge and a broker of knowledge worldwide. The growing role of the network, has, over time, increased the power and influence of its participants, and this is having a profound impact on the traditional organizational hierarchies in the bank. This is not uncommon in the transition of an organization from a traditional structure to that of a networked, knowledge-based organization.

The growing dominance of information as the source of wealth in the developed world, the rapidity of technological change, and the need for an educated, networked workforce, has given rise to the term "knowledge-based organization." This places the focus on the interaction of people, information and technology within structures developed to maximize organizational effectiveness and flexibility in pursuit of corporate (or mission) objectives. [74]

While this term was developed in connection with the reengineering of the private sector, it equally applies to the public sector. A prime example is the Department of Defense, which is viewed as having undergone a "Revolution in Military Affairs" (RMA).[75] The revolution in military affairs is a revolution in information, sensing, and

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[73] Stephen Denning, The World Bank, "World Bank Lessons on Knowledge Management," Presentation to the John F. Kennedy School of Government, Conference on Strategic Uses of Information Technology, Harvard University, 5 May 1999.

[74] James Cash, Jr., Robert G. Eccles, Nitin Nohria, and Richard Nolan, Building the Information Age Organization: Structure, Control, and Information Technologies (Chicago: Irwin, 1994) 24.

[75] Stephen J. Blank, "Preparing for the Next War: Reflections on the Revolution in Military Affairs," in John Arquilla and David Ronfeldt, eds., In Athena's Camp: Preparing for Conflict in the Information Age (Santa Monica, CA, RAND Press, 1997).

precision strike technologies. Modern military forces can conduct their operations with an unprecedented, and revolutionary, degree of precision.

Once able only to guess at where they were, today's soldiers can instantly determine their precise location through the Global Positioning System. Where once a commander might have had little idea where his troops were, today's military leaders can watch battles unfold on computer screens and issue moment-by-moment corrections. Once again, networking is the key, and the military forces have developed a very robust and secure internal network for command and control. [76]

In the RAND publication, In Athena's Camp, John Arquilla and David Ronfeldt, the authors of the chapter "Looking Ahead, Preparing for Information-Age Conflict," call for a "Revolution in Diplomatic Affairs (RDA)," to match the RMA that has been underway since the 1980s. They cite the development of interagency and inter-service networks as characteristic of the RMA, and see a need for a similar capability through an RDA.

Making this vision work will require "an unprecedented level of information sharing," to reflect the "jointness" of peacetime diplomatic/military initiatives, of which Kosovo is only the most recent example. Arquilla and Ronfeldt contend that the importance of meshing the networks is growing, as the complexity of military and diplomatic threats, and our responses to them, increases.

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[76] Michael Mazarr, The Military Technical Revolution, (Washington, DC: Center for Strategic and International Studies, 1993) 16-17.

The authors describe the situation as follows:

As the heat of competition and the allure of technology motivate diplomats to consider creating something like an RDA, they are becoming more aware that the information revolution is unsettling their world, often with the same ambivalent and paradoxical forces that the business and military worlds long ago recognized. Radical changes are now being recognized in the diplomatic world that mirror the changes that long ago aroused the business and military worlds. For example, there are rising tensions between the twin trends of, on one hand, an increasing centralization of control over diplomacy (within governments), and on the other hand, an increasing decentralization of control (due to the emergence of so many new nonstate actors). Moreover, like leaders in the business and military worlds, diplomats now increasingly complain that advanced telecommunications and other aspects of the information revolution are altering the nature of diplomatic time and space: The information revolution is quickening the tempo of diplomacy, and forcing open its once-staid, largely closed processes. Ambassadors are finding that ever more actors involve themselves in a variety of issues – often in a public fashion – making it difficult for the ambassadors to speak as the sole authority. They have to engage more and more diverse actors early on. Their once orderly world is being roiled by the very same, deep dynamic that we have repeatedly called attention to: the dual shift in power (a) from large, hidebound actors to smaller, more agile ones, like NGOs; and (b) to actors, big or small, that can move away from stand-alone to networked forms of organization and behavior. [77]

I think they have made a rather compelling case for an RDA for the State Department: to spur it along the path of revitalization, effectiveness, and relevance as a knowledge-based department, equipped technologically and structured organizationally to network robustly with the growing array of governmental and non-governmental stakeholders who will be involved in the conduct of foreign affairs in the digital age.

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[77] Arquilla and Ronfeldt, 490-491.

III.   THE STATE DEPARTMENT AND INFORMATION TECHNOLOGY: CHALLENGES FOR THE 21ST CENTURY

The State Department has developed an ambitious and thoughtful strategic vision for vastly improving the information technology capabilities for the Department in the twenty-first century. A major hurdle, and the highest short-term priority for the Department, as it is for the U.S. government as a whole, however, is the Y2K challenge. After a rocky start and a good deal of congressional criticism, State is well on the way to meeting its Y2K goal of making its systems compliant to ensure their functioning on January 1, 2000.

I will here provide an overview of the Department's long-term strategic vision and evaluate it in the context of the studies published in 1999 by the Stimson Center and the Center for Strategic and International Affairs, both of which criticize the Department's present IT capabilities and offer a number of recommendations for improving them.

I will then close the paper with a review of the basic information technology, networking and business-process reengineering challenges facing the Department of State as a knowledge-based organization in the uncertain and rapidly-changing times that characterize the world on the eve of the new millennium.

UNITED STATES DEPARTMENT OF STATE

Secretary of State

United States Permanent Representative to the United Nations

Deputy Secretary of State

Arms Control and Disarmament Agency
Director

United States Agency for International Development
Administrator

United States Information Agency
Director

Chief of Staff

Executive Secretariat
Executive Secretary

Under Secretary for Political Affairs

African Affairs
Assistant Secretary

East Asian and Pacific Affairs
Assistant Secretary

Inter-American Affairs
Assistant Secretary

South Asian Affairs
Assistant Secretary

European and Canadian Affairs
Assistant Secretary

International Organization Affairs
Assistant Secretary

Near East Affairs
Assistant Secretary

Under Secretary for Economic and Agricultural Affairs

Economic and Business Affairs
Assistant Secretary

Under Secretary for Arms Control and International Affairs

Political Military
Assistant Secretary

Under Secretary for Management

Consular Affairs
Assistant Secretary

Administration
Assistant Secretary

Finance and Management Policy
Chief Financial Officer

Foreign Service Institute
Director

Diplomatic Security/ Office of Foreign Missions Director
Assistant Secretary

Director General of Foreign Service and Director of Personnel

Medical Services
Director

Equal Employment Opportunity and Civil Rights
Deputy Assistant Secretary

Information Resource Management
Chief Information Officer

Under Secretary for Global Affairs

Democracy, Human Rights & Labor
Assistant Secretary

International Narcotics and Law Enforcement Affairs
Assistant Secretary

Oceans & International Environmental & Scientific Affairs
Assistant Secretary

Population, Refugees and Migration
Director

Newly Independent States
Senior Coordinator

Resources, Plans and Policy
Director

Inspector General

Policy Planning Staff
Director

Public Affairs
Assistant Secretary

Legal Adviser

Legislative Affairs
Assistant Secretary

Intelligence and Research
Assistant Secretary

Chief of Protocol

Counter Terrorism
Coordinator

DIPLOMACY FOR THE 21ST CENTURY: INFORMATION TECHNOLOGY GOALS FOR THE FIRST FIVE YEARS - BUILDING THE NEW INFORMATION ORGANIZATION - DECEMBER 31, 1998

> *"As we approach the end of the twentieth century, the Department of State is facing unprecedented changes in the conduct of international relations and at the same time is experiencing tremendous changes in Information Technology (IT). The world is indeed becoming smaller as nations and individuals are increasingly interconnected by high speed global networks and ready access to a wealth of information from the Internet and other sources."*[78]

The above is the opening paragraph of the report on the strategic vision for the information technology environment that the Department plans to establish in the first five years of the next century. "The vision reflects the changing nature of international diplomacy and the revolutionary changes occurring in IT."[79] The report claims that the concepts contained in the vision raise provocative questions and "challenge the status quo." It stresses that implementation will require changes in State's culture and presents a number of challenges. It may also, the report says, require legislation or executive orders and "will require coordination with other foreign affairs and partner agencies and Congress."[80]

The plan also covers security requirements, overseas networking strategies, and personnel issues such as hiring, retention and training. Details of the plan are covered in a separate Tactical Plan. Together they represent the initiatives that "will begin to move us toward our vision for the next millennium."[81]

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[78] Diplomacy for the 21st Century Preface i.
[79] Diplomacy for the 21st Century i.
[80] Diplomacy for the 21st Century i.
[81] Diplomacy for the 21st Century i.

THE CURRENT IT ENVIRONMENT IN THE DEPARTMENT OF STATE

In order to understand the extraordinary changes that the IT plan proposes, I would like to briefly describe the State Department's IT environment at the end of the twentieth century.

The Department manages the IT function in a fairly decentralized manner. The functional manager of the IT function for the Department is the Chief Information Officer (CIO). The Department established the Bureau of Information Resource Management (IRM) in 1998, elevating the function from a sub-unit of the Bureau of Administration. The networking arm, the Diplomatic Telecommunications Service Program Office (DTS-PO), which manages the circuitry which carries the Department's messages, remains within the Bureau of Administration, and by legislation is run jointly by the State Department and "partner agencies." By law, DTS-PO provides telecommunications services to all U.S. agencies operating at U.S. embassies and consulates overseas.

The IRM Bureau supports State's telegram, telephone, mainframe computer, and other established information systems that collectively, inter alia, process time and attendance, manage payroll records, and perform background checks on visa applicants. The IRM Bureau supports and staffs systems that run in our critical 24-hour operations around the world. At overseas posts, it runs the telephone, radio, computer, and communications systems essential for diplomatic and consular operations. It is involved in training of information management personnel domestically and overseas.

IRM sets standards for IT hardware and software, provides program policy guidance to the under secretary for management, and coordinates IT installations at

domestic and overseas locations. It works with all elements of the Department involved in the IT area – regional and functional bureaus, personnel, training (the Foreign Service Institute), security, foreign buildings, etc. IRM provides temporary duty personnel to assist with the communications requirements for the secretary of state when she travels, and for high-level meetings, such as the peace negotiations in Dayton, Ohio, and Paris regarding the Balkans.

Each geographic bureau in State also has an IT office located in the office of the executive director. The systems office is the liaison with the overseas posts in the bureau's region. In many cases, funding for systems requirements and decisions for priority of installations, remains the primary prerogative of the regional bureaus.

This management structure collectively runs the following systems and networks used to conduct U.S. diplomacy:

- The Record Traffic System (telegrams, classified and unclassified).
- The Official Archive System.
- ClassNet (classified email and Intranet).
- OpenNet (unclassified email and Intranet).

Both ClassNet and OpenNet are configured as Intranets, capable of using web-enabled applications. In 1995, the Department first opened up its unclassified email system to allow for transmission and receipt of emails with attachments to and from Internet addressees. However, no executable files could be attached to emails sent or received through this means. Unlike many other U.S. government agencies, such as DOD and USIA, the Department still does not permit connectivity between OpenNet and the Internet for browser access, "file transfer protocol" (FTP) down/uploading and newsgroup links.

Nonetheless, the OpenNet's Intranet is rapidly expanding and now includes applications such as world maps and other geographic information systems. Many offices and bureaus, as well as overseas posts, are establishing their own web pages on the Intranet. ClassNet is expanding as well, with browser access to SIPRNet.

On a trial basis, a limited unclassified system with full worldwide web access to the Internet, called "Rich-Internet Access" (RIA net) was introduced in 1997. This links the Department's OpenNet with the Internet, to include web browsing and down/uploading files and access to newslinks. Other Internet-accessible stand-alone terminals exist at most posts around the world, linked to the Department's OpenNet for email only. There is currently an internal debate whether to expand the RIA network or to open up the OpenNet to full Internet access and eliminate the RIA net.

The proposed IRM plan for the twenty-first century is a continuation of an extensive effort to upgrade State's IT capabilities. ALMA (see page 42), a major program to standardize and update the unclassified computer and email systems, has been underway for about four years. ALMA provides for a common desktop environment (Pentium PC with standardized software) for all State Department employees who are on OpenNet. This program should be completed worldwide (but not in Washington) by the end of 1999. Modernization of other systems is part of the proposed IRM plan.

The classified system for email is used by about fifty per cent of Washington-based personnel and at one hundred of State's largest posts overseas. Many posts have requested this capability but have not received it, due primarily to lack of funding. Furthermore, it is not possible to communicate between the unclassified and the classified networks, a reality which greatly impedes timely internal communications in State, or

even worse, communications within the U.S. government, when the parties do not all share a common network capability.

For classified electronic communications, other networks exist internally within the Department, and externally to other elements of the U.S. Government. Access and compatibility issues are being addressed as part of overall IT upgrades.

No State Department managed classified videoconferencing capability currently exists. State has access to some DOD assets in Washington, however, for this purpose. Unclassified videoconferencing is available at many of our larger posts, managed by the U.S. Information Agency.

There are currently around three thousand State IRM employees worldwide running about one hundred computer, radio, telephone, telecommunications and network systems, processing 1.7 million telegraphic messages annually, and maintaining equipment and systems that process over twenty million email messages a year. In the Department as a whole, IT expenditures for salaries, activities, and systems worldwide are over five hundred million dollars per year.

The highest IRM priority currently is fixing the Y2K problem. The Department is devoting over one hundred and fifty million dollars to repair mission-critical systems to make them Y2K compliant. [82]

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[82] Most of the information in this section about the IRM Bureau was taken from State Magazine, October, 1998 article, "Information Resource Management, A New Bureau for a New Era," by Daniel P. Sheerin.

Bureau of the Information Resource Management

181000
Chief Information Officer
IRM
Fernando Burbano

CIO Staff
1 Exec Asst, 1 Spec Asst,
1 Secy, 1 WAE, 1 Contractor

181100
Deputy CIO for Management
IRM/EX
Patricia Popovich
42 CS   3 FS   3 PIT   1 WAE
15 Contract

182000
Deputy CIO for Architecture & Planning
IRM/AP
Donald Hunter, Acting
17 CS   13 FS   1 PIT   11 Contract

183000
Deputy CIO for Operations
IRM/OPS
Robert Surprise
277 CS   163 FS   11 PIT   29 WAE
24 WCF   702 Contract

Defense Liaison Office
2 Military

181050
Deputy CIO for Year 2000
IRM/Y2K
David Ames
2 CS   2 FS   28 Contract

182100
Information Resources Mngt Architecture and Planning
IRM/AP/IAP
Donald Hunter

183100
Information Management Customer Center
IRM/OPS/CST
Susan Swart

183200
Systems Integration
IRM/OPS/SIO
Christine Liu, Acting

183300
Messaging Systems
IRM/OPS/MSO
Joseph Yanci

183400
Information Technology Infrastructure
IRM/OPS/ITI
Robert Novak

182110
Architecture & Engineering Div
IRM/AP/IAP/AE
Vacant

183110
Business Center Staff
IRM/OPS/CST/BC
John Cabral, Acting

183210
Systems Services Staff
IRM/OPS/SIO/SYS
Rosemarie Tolson

183310
Management Analysis Staff
IRM/OPS/MSO/MAS
Brenda Nesbitt

183410
Program Mngt Analysis Staff
IRM/OPS/ITI/PMA
Paul Converti

182120
IRM Planning Division
IRM/AP/IAP/PL
Kenneth Alms, Acting

183120
Liaison Division
IRM/OPS/CST/LD
William Wuensch, Acting

183220
Application Integration Div
IRM/OPS/SIO/API
Richard W. Fath

183320
Messaging Systems Development Div
IRM/OPS/MSO/MSD
Phil Nichols

183420
LAN and WAN Services Div
IRM/OPS/ITI/LWS
William Fitzpatrick

182130
IRM Regulations Division
IRM/AP/IAP/RG
Sue E. Neher

183130
Support Services Div
IRM/OPS/CST/SPS
Frank Sass

183230
Client/Server Systems Div
IRM/OPS/SIO/CLS
Christine H. Liu

183330
Messaging Systems Projects Div
IRM/OPS/MSO/MSP
Ed Courlang

183430
Telephones, Wireless and Data Services Div
IRM/OPS/ITI/TWD
Terri Staub, Acting

183240
Mainframe Systems Div
IRM/OPS/SIO/MFS
Leslie E. Jacobs

183340
Special Messaging Operations Div
IRM/OPS/MSO/SMO
Wayne Adams

183440
Systems Integrity Division
IRM/OPS/ITI/SI
Kim Johnson-Braun, Acting

183360
Beltsville Messaging Center Division
IRM/OPS/MSO/BMC
John Hedges

183350
Main State Messaging Center Division
IRM/OPS/MSO/MSMC
Guy Thompson, Acting

183450
Technical Security and Safeguards Div
IRM/OPS/ITI/TSS
Gary Rosiecki

CURRENT PROBLEMS WITH THE DEPARTMENT'S IT PROGRAM

The good news is that most of the problems with State's IT programs can be corrected by the improvements contained in the IT plan for the twenty-first century. The bad news is that the improvements are needed now and needed badly, and that funding to make them current is inadequate.

I traveled to four posts (Ottawa, Paris, Frankfurt and Vienna) in March and April 1999, where I interviewed a number of Foreign Service personnel: those who manage the IT functions at these posts (and regionally out of Frankfurt) and those who use IT resources at the posts. I came away with the impression that Foreign Service personnel have an extraordinary capacity to accept dysfunctional networks, malfunctioning equipment, and a range of security restrictions that they seldom understand. On the other hand, the IRM personnel in the field are overwhelmed with the work associated with ongoing communications requirements and the upgrades currently underway.

Specific examples:

- At one post, users of the "Internet" room, with a number of stand-alone PCs with Internet access, are not allowed to log on to "Hotmail," the policy rationale being a concern that users will access porno channels. This policy effectively makes it impossible for a traveling FSO to access email while on the road (Hotmail equivalents, although technically feasible, are still not authorized for official purposes). At two other posts, there were no Hotmail restrictions. The inconsistency in policy application was obvious and annoying to users, who saw no validity in the restriction.
- A senior officer at one embassy had never heard of State's Intranet, even though it had been available at the post for almost a year.
- Consular personnel were frustrated that applications were simply given to them with no input from them as endusers as to local conditions or needs.

- Networks currently in place that allow the ambassador to send an unclassified email to the Country Team require the message to be routed back to Washington, out to the Internet and back through firewalls to internal networks, and then back to the post. Reliability is poor and delays are frequent. Alternative means are available technically (e.g., local networks and routers could be installed to improve the efficiency and timeliness of the communications). However, the agencies involved would not contribute the funds for this purpose.
- IRM personnel in the field spend most of their time installing and repairing equipment rather than being used as systems-design resources by the endusers, even if some have the capability to assist the FSOs in this manner. It is partly a cultural perception by FSOs, who continue to view IRM officers as "electricians" rather than IT "librarians," as one FSO in Vienna put it.
- Security personnel in the field do not believe that FSOs understand the importance of information systems security and the need for constant vigilance if our systems are to remain protected from viruses or hackers. While sympathetic to the overwhelming desire of the endusers for Internet access through the internal email net, the security people believe that endusers will have to be educated in the need for greater personal discipline before this can be done. Technical fixes are not the only impediment to Internet access.
- At one embassy, a senior officer was trying to coordinate unclassified email communications between the local foreign and defense ministries, the U.S. Army, the Defense Attaché's Office, the Pentagon, and the desk officer in the Department. Some U.S. offices operated only on a classified system, others only on an unclassified system. Despite the fact that the information being disseminated was totally unclassified in nature, it could not be shared through a common email platform. This resulted in frustrating delays in handling the particular issue at hand.

This is a sampling of the reality I found on my trips. It was encouraging to see how State officers managed in spite of the impediments, but discouraging to see how far the Department, and indeed the U.S. government, had to go before the technology that is currently available could be effectively harnessed to improve diplomatic operations in the digital age.

FEATURES OF THE NEW IT PLAN

The new IT Plan has five goals:

- A Secure Global Network.
- Ready Access to International Affairs Applications and Information.
- Integrated Messaging, a Modern Worldwide System.
- Leveraging IT to Streamline Administrative Operations.
- Sustaining a Trained, Productive Workforce.[83]

How will State do it? The Plan lists six strategies:

- Allow our business requirements and market forces to drive the technology we use;
- Rethink the ways we do our business to take full advantage of information access and tools;
- Transform the roles of individuals, small groups, and entire organizations to focus on mission priorities and to enhance effectiveness;
- Provide secure, yet broad-based access to a wealth of internet and other information, while reducing enclaves;
- Streamline operations to improve service and enhance the productivity of our workforce; and
- Provide flexibility to embrace emerging technologies and respond rapidly to new and changing requirements.[84]

> *Technology will enable the Department to provide unparalleled support for its far-flung foreign policy operations. While the specifics of these changes may be impossible to predict, the broad outlines are clear. To exploit the emerging capabilities of technology to further the Department's diplomatic and consular mission priorities, five IT goals will be pursued. These goals will establish a technological framework for the conduct of international affairs in the new millennium – that is, e-Diplomacy.*
>
> Diplomacy for the 21st Century: Information Technology Goals for the First Five Years, December 1998: Department of State, page 4.

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[83] Diplomacy for the 21st Century 4.
[84] Diplomacy for the 21st Century 1.
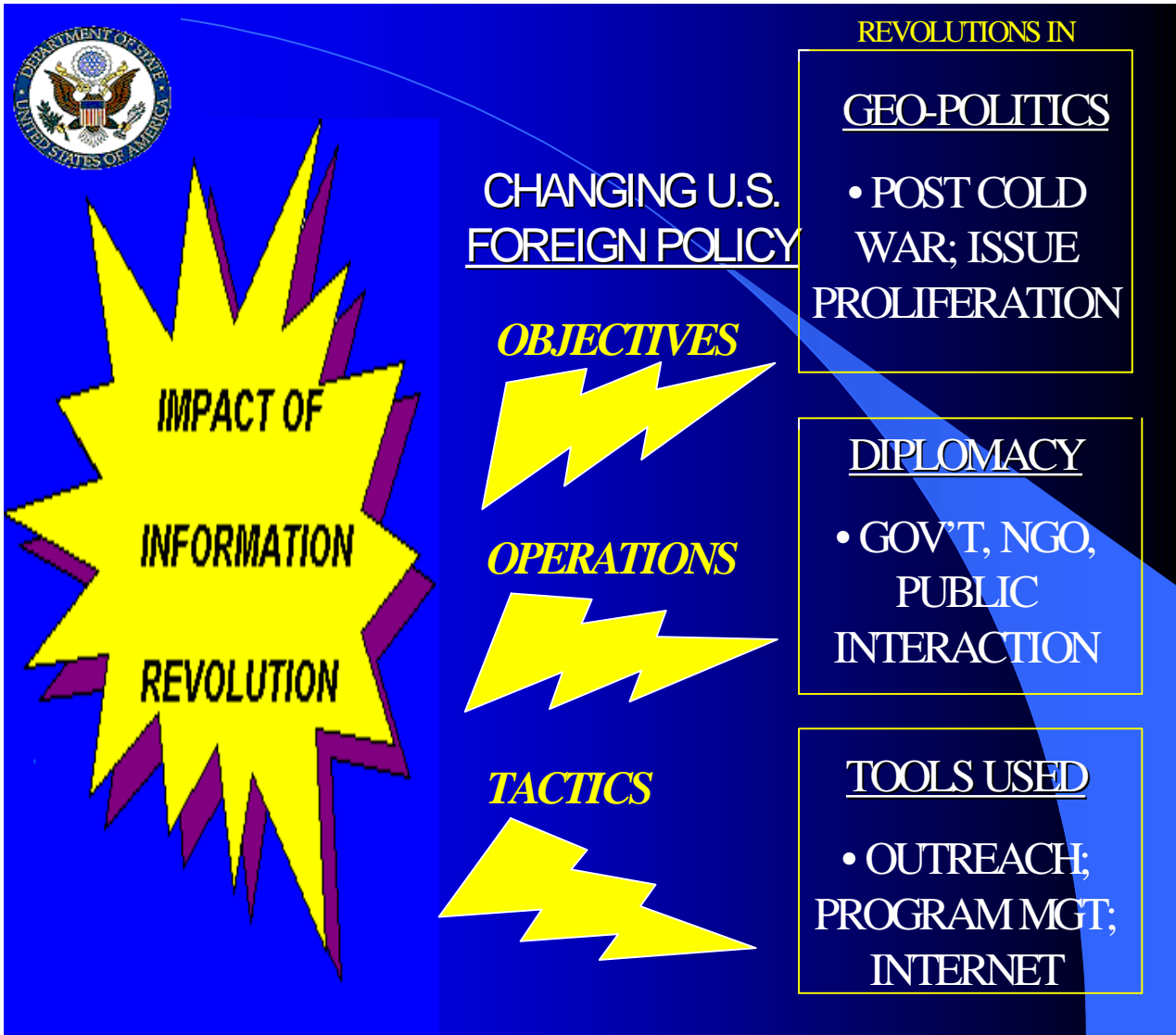
MANAGEMENT AND RESOURCES

This is an area of great concern and uncertainty. State Department funding remains a highly politicized process, subject to the whims of Congress and whatever tussle is going on between the administration and those in the legislative branch who hold the purse strings. The IT plan assumes flat but consistent funding until 2005. It divides up the funding according to the five key IT goals (see charts on page 66). The portion of the pie changes from 2001 to 2005, with foreign policy applications and human resources receiving increased funding, while network and administrative applications are garnering a shrinking portion of the pie.

In terms of management, the plan emphasizes the following:

- Integration and streamlining of IT planning processes – using the IRM Strategic Plan and the IRM Tactical Plan as the drivers, while linking to the International Affairs and State Department Strategic Plans for mission priorities and the context for IT management.
- Renewed focus by the CIO on foreign policy support and customer needs – improving coordination and management of decentralized IT investments, and securing consensus throughout the Department for this strategic IRM vision.
- Coordination of strategic human resource planning and training – ensuring a highly skilled workforce of IT professionals, and all staff trained in use of IT resources and tools.

PERFORMANCE MEASURES

The IT plan contains performance measures to keep the momentum going and to take a snapshot of progress in 2002. The chart showing what will be measured appears on page 67.

BUILDING CONSENSUS FOR MOVING FORWARD

"Achieving the five goals will require a major cultural transformation and effective change management."[85] Yes it will.

This is the politics of information technology. This is where all the issues that whirl around the entire area of information resource management come together. The IT Plan correctly identifies the five forces that must work in concert to achieve the goals articulated in the paper:[86]

- Diplomatic Telecommunications Service Program Office – DTS-PO
- Diplomatic Security
- Personnel Resources
- IT Architecture
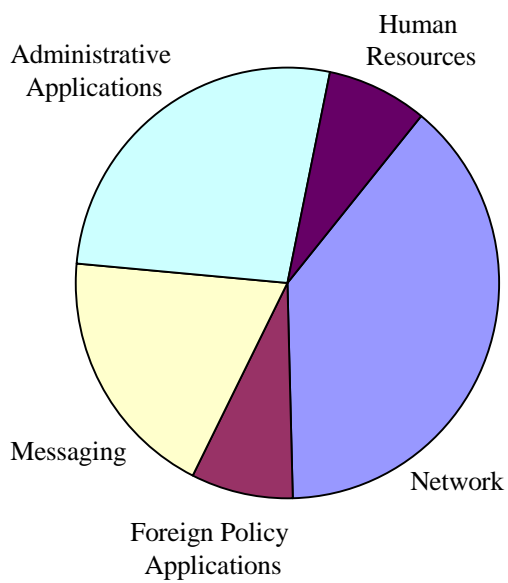- Cultural Change

> **Cultural Change**
>
> *The current culture equates formal communications with cable traffic. The command and control cable paradigm drives information management in the Department. Modern diplomacy demands robust communications, both secure and unclassified, that the cable system cannot provide. While email can support a wider variety of information formats, it does not address the total set of future requirements. Workflow, web access, and document management tools, all supported by security technologies, can provide an integrated and robust solution that can enhance end-user service and overall system security.*
>
> Diplomacy for the 21st Century: Information Technology Goals for the First Five Years - Building the New Information Organization, December 1998: U.S. Department of State. page 17.
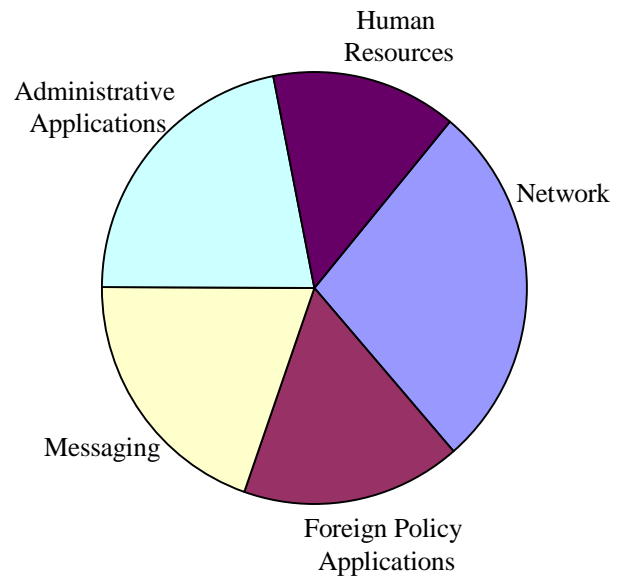
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[85] Diplomacy for the 21st Century 17.
[86] Diplomacy for the 21st Century 17.

Relative Funds Distribution Against Five IT Goals

Year 2001

Year 2005

Goal	2002	2005
Secure Global Network	• Secure, commercial-quality networking services available for a significant share of communication traffic • Full Internet access for all who need it • Enterprise management in place • All plans approved for security and back-up contingency	• 100% of traffic handled by commercial-quality global network • Communication centers modernized and transformed at most posts
International Affairs	• Significant shift in investment from administrative to substantive projects • Widespread use of biometrics for border security • Modeling tools and integrated databases for economic and political analysis	• Continuing shift in investment • Widespread access to foreign policy databases within and outside the Department • Expert tools to support "what-if" and decision analysis
Integrated Messaging	• Interim solutions – CableXpress, classified and unclassified email – fully implemented • Plan for Messaging 2005 approved	• Fully integrated messaging system replacement implemented worldwide • Positioned for multi-level security capabilities
Streamlined Administrative Applications	• Worldwide logistics system deployed • Widespread use of commercial products and services for administrative processing	• Integrated administrative data and MIS (e.g., finance, personnel, procurement) • Improved customer service and satisfaction
Trained Productive Workforce	• Plan adopted and executed for IT workforce management • Innovative training technologies widely used	• Significant increase in FTE retention • Widespread and effective use of IT tools, databases, and services

I will comment briefly on each of them:

- DTS-PO - This organization is a creature of Congress. It resides bureaucratically within the Bureau of Administration and is run jointly by the State and "partner agencies." It is the "AT&T" of the U.S. government for telecommunications worldwide for every agency that has a presence abroad. I believe that DTS-PO will have to either step up to the plate and reinvent itself to deliver the bandwidth and networking services called for in this plan, or it will have to be disbanded in favor of alternate service providers to "ensure continuity of service at competitive prices." [87]

- Security - This must be considered in the same context as cultural change. State traditionally has given short shrift to security as demonstrated by the Moscow embassy construction debacle of the 1980s. With growing threats to U.S. government personnel and installations overseas, the pendulum has swung strongly in the direction of risk avoidance, and this is evident in the area of information systems security. A number of people I interviewed for this paper are convinced that technology presently exists that will ensure the integrity of diplomatic information that transits into, out of, or through the Internet, making, therefore, proprietary networks unnecessary. On the other hand, State personnel are notoriously slipshod in their observance of security guidelines, and it will require a major cultural shift, with top-level leadership supporting it, to ensure that discipline takes a foothold in managing IT resources that will be deployed as part of this plan – by users as well as administrators.

- Personnel Resources - The Department is competing for IT specialists in a very strong economy. Offerings of sign-up bonuses have helped bring in new recruits, and State is considering a program of retention bonuses in an effort to stem the flow of personnel who are leaving in pursuit of higher-paying jobs in the private sector. That is one part of the problem. In the long-term, more resources will have to be applied to life-long learning – by IT specialists and endusers. There is little of either currently, although the amount of training is increasing steadily. The Foreign Service Institute has created a special "School of Applied Information Technology" to concentrate on these requirements. Another cultural issue is the status of IRM personnel within the State Department. They are still largely considered blue-collar workers, those who are called to fix a broken machine or replace a cable. While the IRM personnel do have knowledge of systems and can truly be "information managers," foreign affairs officers seldom call on them for their expertise.

- IT Architecture - Networking capability and system flexibility are two essential requirements in this area. Resolution of the Internet-access problem is a current issue that should be resolved shortly – and probably in favor of allowing Internet access. Eventually, the three separate systems will be reduced to two, and with trust in technology and internal discipline, I expect that by the end of the period covered by the plan, there might be one system for all electronic transmissions, classified and unclassified, with classified communications protected through "tunneling" and black data packets.

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[87] Diplomacy for the 21st Century 17.

- Cultural Change - The IT Plan calls for the demise of the "cable culture" that has characterized the State Department's diplomatic communications for decades. It is a deeply engrained "command and control paradigm." The "convergence" of our communications systems, which will mirror what is taking place in the private sector, will mean the end of the cable as we know it. New tools for archiving and retrieving official correspondence will have to be made part of the new IT culture.

NEXT STEPS

The concluding page of the report also reflects the political nature of the plan. It calls for:

- Obtaining Consensus on Vision.
- Planning and Implementing a Technology Demonstration Laboratory.
- Updating IRM Strategic Plans.
- Beginning to Resolve Issues.
- Developing Architectures.
- Coordinating Assessment of and Adjustments to Key Tactical Plan Projects.
- Planning and Conducting Pilots. [88]

The Plan calls for the establishment of a dedicated project team to promote the long-range vision for IT in the State Department. It states that the team will work with all stakeholders in carrying out the above-listed steps.

One of the strongest cultural barriers to success, in my view, is the tendency of the Department's foreign policy practitioners to look at IT as another "service" provided to them by the administrative cadre of the Department. It is an unfortunate, but very real cultural divide. It is essential, therefore, that the stakeholder group with the most to gain (or lose) – mainly the political and economic officers – be adequately represented on the dedicated project team and also participate in the interchange of ideas as the plan is carried out.

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[88] Diplomacy for the 21st Century 18.

This reaffirms my belief that the IT Plan must be integrated with a process-reengineering exercise, with active participation by the "substantive" officers of the Department – those who will benefit most from the availability of the upgraded information technology. They should participate fully in the process of developing and deploying the foreign policy applications called for in the plan.

THE U.S. INFORMATION AGENCY - ANOTHER CULTURAL CHALLENGE

On October 1, 1999, the U.S. Information Agency will cease to exist. Its personnel, programs and resources will be integrated into the State Department. This is the centerpiece of a broader reorganization entitled "The Foreign Affairs Reform and Restructuring Act of 1998." The legislation also calls for the abolishment of the Arms Control and Disarmament Agency (ACDA), and transfer of some functions and resources from the U.S. Agency for International Development (AID) to State. AID will continue to exist, however, as a separate agency.

> Integrating USIA and bringing public diplomacy insights into play sooner will develop more effective policies that are persuasive to foreign audiences. The infusion of USIA's strategic approach to public diplomacy, open style, close ties with non-governmental organizations (NGOs), technology for open communications, and skillful Internet use will make U.S. foreign policy more agile. [89]

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[89] Forward to "The Foreign Affairs Reform and Restructuring Act of 1998," submitted to Congress on 30 Dec. 1998.

The Forward to the Reorganization Plan also mentions "reinvention":

As integration advances, State will continue intensive efforts to reinvent itself. Integration offers more scope for this and widens the circle of opportunity to restructure and adopt best practices. State has already taken some important steps. The Under Secretaries have assumed responsibility as State's Corporate Board, chaired by the Deputy Secretary, and the Assistant Secretaries have been given more autonomy in resource management. Performance Planning has been redesigned greatly to enhance the alignment of strategy and resources.[90]

The reorganization involves 7,000 USIA employees, Americans and Foreign Service Nationals. About 3,000 will remain with the Broadcasting Board of Governors (BBG) and the balance will be moved to State. The reorganization is a major undertaking.

Under the reorganization plan, State will create a new position of under secretary for public diplomacy and public affairs who will provide policy oversight over two bureaus: A Bureau of Information Programs and International Exchanges, and an expanded Bureau of Public Affairs. Public Affairs includes the Press Office, which supports the secretary of state directly. That linkage will not change with the reorganization, although the new Public Affairs Bureau will report to the new undersecretary for public diplomacy and public affairs.

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[90] Forward to "The Foreign Affairs Reform and Restructuring Act of 1998," submitted to Congress on 30 Dec. 1998.

The reorganization plan describes the duties and responsibilities of the two new bureaus as follows:

> The Bureau of Information Programs and International Exchanges will be responsible for educational and cultural programs and will produce information programs and products tailored for foreign opinion-makers. Its information efforts will focus on foreign audiences in recognition of the intent of Congress to separate overseas public diplomacy efforts from those that inform the press and the American public about foreign policy. The continuing commitment to academic and professional exchange programs will continue unabated. The Bureau of Public Affairs will expand through incorporating the press relations offices of all four foreign affairs agencies and the Foreign Press Centers (now operated by USIA). Public diplomacy staffs will be added to each State regional and functional bureau. [91]

From an IT perspective, the reorganization will bring in 4,000 employees who serve domestically and at overseas posts who are accustomed to working with the Internet as an essential tool in their public diplomacy programs. Their Internet access is on the same architectural platform as their internal unclassified email and messaging system, a linkage that State has yet to make. State and USIA are working closely together to resolve this imbalance. The likely outcome will be that State will adopt USIA's flexible standard, rather than force USIA to adhere to State's separation of the two systems. This is likely to be one early and positive outcome of the reorganization.

Another likely outcome will be the benefit to State from the cultural "exposure" to USIA IT-savvy officers, who have a deeper understanding of the capabilities of information technology, especially the networking paradigm. Many USIA officers will also bring to State their considerable (and painful) experiences in downsizing, budget cutbacks and reengineering, which USIA underwent in the early 1990s.

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[91] "The Foreign Affairs Reform and Restructuring Act of 1998," Section VI. Policy Support Functions, Part E - Press and Constituent Relations.

I saw first-hand evidence of this in Vienna, where the USIA Regional Program Office (RPO) was faced with the challenge of reinvention, due to severe downsizing and budget cutbacks in the wake of the end of the Cold War. Nonetheless, at the same time, nineteen new countries, which depended on Vienna for regional support, were formed.

The Vienna RPO rose to the challenge and restructured itself "into a more flexible, cost-effective operation, which stressed decentralized management, delegation of responsibility, maximum use of technology, flexible deployment of staff in teams as needed, service orientation, and rapid response to posts' needs." [92]

The focus shifted from output to services. The RPO now conducts training for new staffs at the posts that opened in the former USSR and the former Yugoslavia. Training increased from three sessions in 1994 to forty in 1998, for example. The RPO provides IT support to all posts, which includes hardware, software, programmatic applications, trouble shooting and training. The number of LANs supported went from thirteen in 1994 to twenty-nine in 1998. Their success is based on a flexible, team-oriented approach, and fitting IT applications to business process requirements.

Based on my interviews with USIA personnel (Americans and Foreign Service Nationals) in Ottawa, Paris, Lyon, and Vienna, while there is certainly some apprehension, most are excited at the challenges and opportunities presented by the reorganization. They believe they will bring "value added" to the Department, especially in terms of their IT expertise. On that basis, I predict that this will yield cultural benefits for the Department as a whole and energize its overall IT plan.

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[92] "Regional Procurement Office, U.S. Information Service, Vienna, Austria," Brochure (Vienna: 19 Nov. 1998) 2.

IV.   TWO FOREIGN AFFAIRS GROUPS ISSUE REPORTS: RECOMMEND SWEEPING STATE DEPARTMENT REFORMS

- **REINVENTING DIPLOMACY IN THE INFORMATION AGE (Center for Strategic and International Studies – CSIS, October 1998)**

AND

- **EQUIPPED FOR THE FUTURE: MANAGING U.S. FOREIGN AFFAIRS IN THE 21ST CENTURY (The Project on the Advocacy of U.S. Interests Abroad - The Henry L. Stimson Center, October 1998)**

On the release of these two reports, the Washington Post reported: "U.S.

Diplomacy Behind the Times, Studies Say." The lead paragraphs of the article state:

> Hampered by stuffy attitudes, obsolete technology and inefficient organization, the State Department and other agencies of American diplomacy are ill equipped to advance U.S. interests and provide global leadership in the new century, according to two new studies by Washington think tanks.
> Both studies conclude that the State Department remains locked into a traditional style of diplomacy – characterized by obsessive secrecy and conducted by an elite group of insiders – that is increasingly irrelevant in an era of exploding access to information.[93]

The article goes on to say: "State is well behind the trends of the information era

in both technology and attitudes, relying on the closely-held diplomatic cable as its

principal form of communication and on 1970s computers."[94]

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[93] Thomas W. Lippman, "U.S. Diplomacy Behind the Times, Studies Say," Washington Post 28 Oct. 1998, A17.
[94] Lippman A17.

Despite the critical stance taken by the <u>Washington Post</u>, the reports were

received positively by the State Department. In her remarks at the official introduction of

the CSIS report, on October 28, 1999, the Undersecretary for Management at State,

Bonnie Cohen, commented:

> The receipt of this outstanding bipartisan report … couldn't have come at a better
> time for the State Department. Secretary Albright welcomes the well-developed,
> thoughtful, concrete recommendations from sixty-three of the country's most
> experienced foreign policy practitioners. The recommendations in reinventing
> diplomacy in the information age are serious ones: from addressing the
> qualifications and recruitment and training of foreign service staff to the State
> Department's use of technology to the importance of tradeoffs between openness
> and security. We intend to take these seriously. We welcome the support this
> report represents. The time these people and The Center for Strategic and
> International Studies have devoted to this effort is a tacit acknowledgement of the
> importance of a strong, well-functioning foreign policy structure for the
> millennium.[95]

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[95] Bonnie Cohen, Undersecretary of State for Management, speaking at The Center for Strategic and
International Studies (CSIS), on the occasion of the release of the report <u>Reinventing Diplomacy in the
Information Age,</u> 5 Nov. 1998.

REINVENTING DIPLOMACY IN THE INFORMATION AGE (CSIS)

In 1997, CSIS set up a panel of distinguished leaders from the private and public sectors to take a look at how the United States can use its strategic superiority in information technology to advance the country's interests in the post-Cold War geopolitical environment. Their underlying premise was that "the traditional instruments of diplomacy and national security must be redefined to account for the new realities of the information age."[96] The panel was co-chaired by Richard Burt and Olin Robison.

The report's Executive Summary calls for:

reinventing the conduct of diplomacy in the information age. With a focus on the information revolution, the widening participation of publics in international relations, and the concurrent revolutions in global business and finance, the panel recommends sweeping changes in the Department of State and other foreign affairs agencies. [97]

The report emphasizes the importance of information technology as a prime catalyst of change. Equating the current era with the invention of the printing press five centuries ago, the report states that "the microchip is again revolutionizing information gathering and transmission, and will bring even more profound changes in the next century. The critical elements are the international networks created by computers and electronic connectivity." [98]

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[96] Reinventing Diplomacy in the Information Age "Task Force on Diplomacy in the Information Age," Concept Paper, February 1997.
[97] Reinventing Diplomacy in the Information Age Executive Summary 8.
[98] Executive Summary 8.

I do not intend to review all of the study's findings nor all of its recommendations. Rather, I will concentrate on those findings and recommendations that relate to information technology. The report states flatly: "'It's no secret: the State Department's information technology is obsolete.' Madeleine Albright so testified at her confirmation hearings in 1997."[99] The report also quotes Undersecretary for Management Bonnie Cohen: "the construction of an information infrastructure to support American diplomacy in the twenty-first century is one of my most critical and urgent objectives."[100]

The report goes on to comment that they found American diplomats isolated when it came to access to information. Although Congress has provided additional funds, the report questions if the funding is sufficient to make up for the inadequacies of the current structure. While the report is quite critical, and, in my view, not necessarily inaccurate, it does not take into account the extensive IT plan the Department has developed to overcome the deficiencies of the past. The panel does acknowledge, however, that the new chief information officer "fully understands the full extent of the challenge."[101]

The report cites several "pockets of technological excellence within the State Department," such as the Consular Service and the Bureau of Oceans, Environment and Science. However, they indicate that political and economic officers "continue to labor with antiquated technology." [102]

The report also cites deficiencies in software, training, use of cell phones, pagers, digital personal assistants, laptops and video conferencing. These can not be considered

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[99] Reinventing Diplomacy in the Information Age 41.
[100] Bonnie Cohen, Senate Task Force on Function 150, 17 Sept. 1998.
[101] Reinventing Diplomacy in the Information Age 42.
[102] Reinventing Diplomacy in the Information Age 42.

as luxuries, the report alleges. These are valid criticisms, in my view, but do not take into account the security vulnerabilities that these new technologies present.

In summary, the report takes the State Department to task for a performance gap, failure to stay abreast with new media, inadequate outreach to non-state players, and resistance to change (primarily with regard to support systems for leading change). [103]

What does CSIS recommend in terms of IT improvements for State? The panel advocates provision of faster computers linked to networks. It also stresses the importance of an information strategy linked to American values and its global leadership in IT. While giving State greater efficiency, a broad IT strategy, according to the panel, will also "encourage broader global engagement between publics and practitioners, increase tolerance among isolated populations, and provide information from which shared solutions can be developed."[104]

CSIS recommends that State deal with its preoccupation with absolute security and design a system that minimizes risk yet increases functionality. They propose a single system for email, Internet and official traffic through the "confidential" level.[105]

One of its best recommendations, in my view, calls for the development of a "fully integrated and comprehensive Intranet to integrate information and processes" for the Foreign Affairs community. This would ultimately replace the current system of cable storage and retrieval. [106] This giant cultural leap forward is already part of the Department's IT plan: the interim (2002) upgrade to "Cable Express," followed by a fully integrated system by 2005 (see page 67).

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[103] <u>Reinventing Diplomacy in the Information Age</u> 41-51.
[104] <u>Reinventing Diplomacy in the Information Age</u> 62.
[105] <u>Reinventing Diplomacy in the Information Age</u> 62.
[106] <u>Reinventing Diplomacy in the Information Age</u> 63.

How does CSIS propose that all of these ambitious and far-reaching changes actually be put in place? Their recommendation: "The Department of State, with the support of the NSC, should develop a plan of action to reform the culture of diplomacy and upgrade the quality of technology. Neither renewal nor reform will occur without extraordinary direction and leadership."[107] This requires a change leader, and CSIS believes it should be the secretary of state, who, in turn, should designate a senior executive team from State, AID, USIA, Commerce and Agriculture and other agencies involved in foreign affairs. Overseas, they emphasize further, ambassadors must take the lead for promoting the change agenda.

 CSIS also calls for a "Management Advisory Council," so that a broad representation can be drawn into the change process from the corporate, military, media, academic and NGO communities. Finally, CSIS calls for nothing short of a "Compact with Congress," to enlist their support for the reinvention of diplomacy. [108]

The closing paragraph of the CSIS study states:

At the century's end, American leadership is unrivaled. American business is booming. American higher education is unsurpassed. American technology is transforming the world. And what of American diplomacy? To sustain dynamic stability in a complex world, it must be guided by coherence, capability, discipline, and agility. It must be characterized by openness and permeability. It must change now.[109]

The report, while critical of the State Department, does not accurately portray the extent of the current effort underway to upgrade the IT capabilities of the Department worldwide. Unfortunately, it came out just before the release of the Department's own IT plan. Nonetheless, I believe its recommendations regarding the "action plan" to be

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[107] <u>Reinventing Diplomacy in the Information Age</u> 69.
[108] <u>Reinventing Diplomacy in the Information Age</u> 70.
[109] <u>Reinventing Diplomacy in the Information Age</u> 72.

salutary and compelling. The Department has established several working groups to look at "the embassy of the future," related in part to the bombings of our embassies in East Africa last summer, and has invited officials from CSIS and the Stimson Center to take an active part in this review. It is only through a broad coalition of interested stakeholders, with strong leadership backing, that meaningful change can occur.

One area that the CSIS study didn't cover sufficiently, in my view, is the "command and control" nature of running our overseas posts. The Country Team concept, I believe, has eroded over the years, as the State Department's share of overseas presence has declined. The new agencies, primarily involved in law enforcement, with their own resources and agendas, are able to operate fairly independently abroad. The National Partnership for Reinventing Government (NPR) noted this in 1993 and made a recommendation to increase the management authority of our ambassadors abroad. This recommendation remains outstanding, pending congressional action. If and until this authority is expanded, ambassadors will remain somewhat limited in their ability to manage all U.S. government assets under their jurisdiction.

EQUIPPED FOR THE FUTURE: MANAGING U.S. FOREIGN AFFAIRS IN THE

21^(st) Century (The Henry L. Stimson Center)

The Stimson Center report, prepared as part of the "Project on the Advocacy of

U.S. Interests Abroad," is much shorter than the CSIS study (27 pages versus 123). The

thrust, however, is the same: an assessment of U.S. diplomacy in the post-Cold War

world, which evaluates how best to organize the U.S. government to conduct foreign

relations, and how to link resources effectively with the nation's ongoing foreign policy

needs. The Executive Summary states:

> While the world has changed radically in the second half of the 20^(th) century, the means and methods used by U.S. diplomats to advocate our interests abroad are barely out of the quill-and-scroll stage. Tens of millions of Americans now interact overseas on a daily basis for both business and pleasure. Certainly business leaders are equipping themselves for the future; so are military leaders; but diplomats – our first line of defense – are handcuffed by outdated structures and outmoded tools.[110]

The theme of the report is "dynamic representation," a new approach for the new

millennium. It cites four areas where the U.S. needs to get its "government house in

order":

- Remodeling the Foreign Affairs Machinery;
- Embassy Reform: Better Service for Clients the World Over;
- Information Technology: Plugging into a Wired World; and
- Accessing the Private Sector: Bridging the Gap to an Entrepreneurial Culture.[111]

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[110] Equipped for the Future v.
[111] Equipped for the Future iii-iv.

The report identifies five "disconnects," which is the term the panel uses to describe the missing elements in current U.S. representation:

- Interagency Coordination: Institutional expressions of a comprehensive view;
- U.S. Embassies Overseas: Showing the flag;
- Information Technology: Leaving the nineteenth century behind;
- Beyond Governments: Forging an inclusive democracy in a complex world; and
- Stable Budgets: The need for a foreign policy consensus expressed in dollars.[112]

The panel views "dynamic representation" as a way of looking at a complex world, where a multiplicity of actors need to work together to:

> Build structures and processes and invest the resources to support them …
> Dynamic representation requires a foreign policy infrastructure that can exploit the technology of instantaneous communications to allow embassies to perform their duties without undue micromanagement from Washington. It also requires that diplomats be given the latitude and resources to take positive steps to defuse conflicts, prevent crises and advance America's interest.[113]

The main features of "dynamic representation" are:

- Interagency coordination as the vehicle for developing a comprehensive foreign policy;
- Decentralized decision-making – greater latitude to overseas posts;
- Embassies as adaptive institutions;
- Modern communications and information technology, cost-effective, yet enhancing a global presence befitting the world's greatest power; and
- Accessing the private sector to augment state-to-state relations, e.g., the business community, NGOs, international organizations and charitable institutions.[114]

The Stimson report has the following specific recommendations for the State Department in the IT area:

- Consolidate State's Network Infrastructure - reduce the number of systems from four to two – classified and unclassified, to provide for Internet access. More use should be made of commercial networks, working with NSA to ensure adequate security of sensitive information;

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[112] <u>Equipped for the Future</u> iii.
[113] <u>Equipped for the Future</u> 7.
[114] <u>Equipped for the Future</u> 7.

- Build a government-wide information system. This would link all U.S. government agencies with overseas interests;
- Upgrade State's current capabilities – use off-the-shelf technology to provide State with a broad range of IT capabilities; and
- Foster a change in culture at the State Department.[115]

The Stimson report calls for increased funding of four hundred million dollars, separate from the function 150 account, to fund improvements in the Department's IT infrastructure, for new equipment, additional bandwidth, training and modernization.

In calling for a change in State Department culture, the study attributes the success of improving IT capabilities in the Department of Defense to DOD's top leadership, "who recognized its usefulness early on and pushed to make it widely available."[116] The study calls for top State Department executives to familiarize themselves with IT used by top leadership at DOD as well as the IT available in the private sector. Moreover, the study calls for the establishment of a "technical-expert-in-residence" program of IT specialists to help spur use of new technology in foreign service work. The panel emphasizes the need for training programs to reinforce the role IT plays in allowing "diplomats to perform their missions as information gatherers and analysts."[117]

In its final comment on IT and the State Department, the panel states:

Historically, the State Department and the Foreign Service have always been in the forefront of efforts by the government to use information to further the national interest. There is no reason, why, even with the advent of the computer, and the Internet, they should not remain so by employing the latest technologies – especially in light of the fact that State has one of the best government training facilities available: the Foreign Service Institute. State should not risk forgetting its lead role in analyzing information by failing to keep up to date.[118]

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[115] Equipped for the Future 23.
[116] Equipped for the Future 23.
[117] Equipped for the Future 24.
[118] Equipped for the Future 23.

I found the Stimson Center report to be more concise and "hands-on" than the CSIS study. Its recommendations appeared to be more relevant and realistic than those in the CSIS report. I might add, however, that the two reports compliment each other. Taken as a whole, they provide a powerful description of the information technology needs of the State Department as well as those of the overall foreign policy establishment of the U.S. government, to meet the diplomatic challenges of the twenty-first century.

V.   CONCLUDING REMARKS

As a Fellow at the Weatherhead Center for International Affairs at Harvard University, removed from the daily responsibilities of a career foreign affairs practitioner, I had the rare privilege of spending an academic year devoted to research on information technology and the conduct of foreign relations, with a focus on the U.S. Department of State.

Through the courses I attended, the books and articles I read, and the impressions gained through numerous interviews with international affairs practitioners, academics, and information management specialists, I was able to examine the interrelated themes and currents – discordant at times – that are at play in the conduct of foreign affairs on the eve of the twenty-first century. There certainly was no shortage of material on the topic!

However, there was remarkable consistency in what I found:

- **The Department of State is not keeping pace with rapidly changing information technology capabilities of other U.S. government entities involved in foreign affairs**

There is a widespread view that the State Department is not keeping pace with the rapidly changing information technology capabilities; and that IT is being used to better advantage by other elements of the U.S. government that are involved in foreign policy and international security matters on behalf of the United States (e.g., the Department of Defense and the Central Intelligence Agency). While the Department has put together a very detailed and ambitious plan to upgrade its IT capabilities, it is too early to say if

political forces will provide a supportive leadership and financial underpinning to this essential undertaking.

If the necessary political and financial support erodes, for whatever reason, while other elements of the U.S. government are not so constrained, I believe it will result in further marginalization of the State Department in the foreign affairs arena, at a time when diplomacy, paradoxically, needs to be used more effectively and forcefully, and in network-compatible collaboration within the U.S. government and with non-U.S. stakeholders, to defuse rising international tensions in an uncertain world.

- **The U.S. government as a whole lacks a robust networking capability, both internally and with external stakeholders in the conduct of foreign relations**

I also found consistent examples of the powerful influence and effectiveness of information networks and "grand coalitions" that transcend traditional organizational boundaries. With today's technology, it is possible to have a broad and rich "community of practice" that brings together social, political, religious, military and corporate interests that have a need, short-term or long-term, to collaborate on a given issue. The State Department needs to be a player in this rapidly evolving global structure, and it needs the best tools available to hold on to its leadership.

Unfortunately, the inadequate network infrastructure is a limiting factor. Currently, the Department is sorely constrained in its ability to communicate, not only internally, and not just within the U.S. government, but externally as well. Although a policy framework for government-wide email exists, the U.S. is still probably years away from having the full infrastructure required for rich networking interaction. The State Department, through its participation in White House-led information infrastructure initiatives, as well as through its membership in the Federal CIO Council, needs to be a

loud and influential agent of change, and press for the expansion of this capability. By contrast, the Canadian government has had a government-wide email system and Intranet in place for three years.

- **The State Department needs to overcome a range of security impediments to the full implementation of its IT plan**

In moving ahead with its ambitious IT plan, the Department will need to address a range of security issues and generally make the cultural shift from risk avoidance to risk management. It needs to exert its leadership internally as well as externally. In other words, it needs to put its own house in order in order as quickly as possible through the introduction of enhanced IT capabilities that are on par and harmonious with other U.S. government participants. This is essential in order for State to retain its leadership role in foreign affairs. Externally, the Department probably will open up its link with the Internet shortly, in recognition of the essential nature of this capability for public diplomacy.

- **State needs to place a higher value on lifelong learning, both for its information technology professionals and for the IT end-users**

The organization of tomorrow involved at the forefront of foreign policy formulation and execution must be a knowledge-based organization, and an organization that puts a high value on life-long learning. State needs to look at the need for this in a comprehensive fashion, and bring together the providers of training (the Bureau of Personnel and the Foreign Service Institute) with the stakeholders in the IT area to develop the equivalent of a training strategic vision to go along with the broad IT plan.

- **The Department needs to exert committed leadership in developing a strategy to link the IT plan with broad business process reengineering. A key to success is forging a strategic partnership between the political and economic officers, who will benefit significantly from the new IT capabilities, and information management, administrative and consular officers. External stakeholders also need to be involved in this effort.**

My final observation is that the State Department needs to engage in broad business process reengineering to compliment the IT plan. A major benefit of the IT enhancements will be to give political and economic officers a range of new foreign affairs applications. How they use them in gathering, evaluating, and disseminating information will be the key to the Department's ability to retain its leadership in the future management of the foreign affairs process. It makes no sense to use new tools to do business the same way – using the IT enhancements mainly as a way to do things faster.

The reengineering effort will require these stakeholders (who traditionally see themselves as the true "Mandarins" of the Department) to forge a working partnership with the information management, administrative, and consular officers, who have the bulk of the management experience, the best knowledge about information technology, and the resources to deploy it effectively. This partnership, with assertive leadership and backing from the secretary, the deputy secretary, and the Department's Corporate Board, should bring together the undersecretary for political affairs, the undersecretary for management, the director general of the Foreign Service, the director of the Foreign Service Institute, the assistant secretary for administration, regional and functional bureaus, and the CIO, as well as other government agencies and external stakeholders from international organizations and NGOs. These stakeholders need to evaluate the business process implications of the IT plan, develop appropriate reengineering strategies

within State and implement them. Research suggests that the most effective means of achieving lasting organizational change is through strategically targeted pilot projects.[119]

In this manner, State needs to look at its core functions in light of the changing world and changing U.S. interests. In the business world, reengineering starts with the premise: "If we were just starting this business, what would we want to do differently to reflect the core objectives of our organization and maximize our competitiveness?" State needs to do the same. The payoff is power, influence and effectiveness. Overseas, embassy structures and authority relationships are dysfunctional. While IT improvements will help, it won't change the Country Team dynamics unless the power relationships and processes change as well, through reengineering that is harmonious with the networking realities of the digital age and reflects the core business processes of today's overseas missions.

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[119] Beer, Eisenstat and Spector 6.

In closing, I will offer comments by Joseph Nye and Jonathan Spalter. Nye is currently Dean of the John F. Kennedy School of Government at Harvard University and formerly Chairman of the National Intelligence Council and Assistant Secretary of Defense for International Affairs in the Clinton Administration. Nye, writing in <u>Foreign Affairs</u> with William Owens, has this to say about diplomacy, knowledge and power.[120]

Knowledge, more than ever before, is power. The one country that can best lead the information revolution will be more powerful than any other. For the foreseeable future, that country is the US. America has apparent strength in military power and economic production. Yet its more subtle comparative advantage is its ability to collect, process, act upon, and disseminate information, an edge that will almost certainly grow over the next decade. This advantage stems from Cold War investments and America's open society, thanks to which it dominates important communications and information processing technologies, and has an unparalleled ability to integrate complex information systems. This information advantage can help deter or defeat traditional military threats at relatively low cost.

The information edge is equally important as a force multiplier of American diplomacy, including "soft power" – the attraction of American democracy and free markets.

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[120] Nye and Owens Abstract.

Jonathan Spalter is the Associate Director for Information and Chief Information Officer of the United States Information Agency. Spalter (with Kevin Moran) wrote recently in iMP Magazine:[121]

Accessibility, inclusiveness, flexibility, and connectivity. These are the watchwords of our new "digital" diplomacy – a diplomacy that recognizes that old structures and habits no longer are sufficient to engage and lead in an increasingly digital and networked international system. For the United States to remain at the forefront of world affairs, it must embrace the tools of technology and information.

Nye's and Spalter's words underscore the importance of transforming the State Department, through a "Revolution in Diplomatic Affairs" into a cutting-edge knowledge-based organization, equipped with the best information technology tools, trained professionals, networked architecture and reengineered organizational structure to manage the complex diplomatic challenges facing the United States in the digital age.

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[121] Jonathan H. Spalter and Kevin Moran, "Toward a New Digital Diplomacy: Information Technology and U.S. Foreign Policy in the 21st Century," iMP Magazine: May 1999.

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APPENDIX I - LIST OF INTERVIEWS

UNITED STATES GOVERNMENT:

DEPARTMENT OF STATE:

Office of the Secretary of State

       Dr. Morton Halperin - Director, Policy Planning
       Todd Greentree - Senior Advisor, Office of Resources, Plans and Programs
       Richard Shinnick - Executive Director
       Danny McIe - Director, Office of Information Resource Management
       Stephen Williams - Office of Information Resource Management

Bureau of Administration

       Patrick Kennedy - Assistant Secretary
       Patrick Hayes - Director, China 2000

Bureau of Information Resource Management (IRM)

       Fernando Burbano - Chief Information Officer
       Robert Surprise - Deputy CIO, IRM Operations
       Donald Hunter - Deputy CIO, for Architecture, Planning
           and Regulations (Acting)
       Daniel P. Sheerin - Program Analyst
       Jack Aubert - Intranet Coordinator

Office of Management Policy and Planning

       Donald Hays - Director

Bureau of Diplomatic Security (DS)

       Wayne Rychak - Deputy Assistant Secretary
       Steven Klein - Chief of Branch, DS Training Center
       Calvin Reimer - Information Systems Security Instructor - DS Training Center
       Mary Sue Holland - Division Chief, Information Security Programs

Bureau of Personnel

       Gretchen Welch - Deputy Assistant Secretary

Bureau of Public Affairs

>Colleen Hope - Manager of the Department of State's Official Web Site

Foreign Service Institute

>Bruce Morrison - Dean, School of Applied Information Technology
>Robert Hopper - Head of Political Training

Bureau of Oceans, Environment and Science

>Michael Bishton - Information Management Division

Bureau of European Affairs

>Susan Vanhaften - Systems Migration Officer

Bureau of International Organization Affairs

>Andre Goodfriend - Office of Policy, Public and Congressional Affairs

OTHER U.S. GOVERNMENT AGENCIES:

UNITED STATES INFORMATION AGENCY (USIA)

>Dan Campbell - Director of Management and Technology
>Victor Riche - Chief of Planning Division, Office of Management and Technology
>Joan Matejceck - Division Chief - Overseas Technology

DEPARTMENT OF DEFENSE (DOD)

>Lt. Col. Robert Butler - Office of the Secretary of Defense (OSD)
>Roger Cressey - OSD/Requirements and Plans
>Jim Miller - OSD/Requirements and Plans

CENTRAL INTELLIGENCE AGENCY (CIA)

>John Fish - Deputy Chief of Policy, Plans and Resources for the Intelligence Community
>Charles Sherupski – Deputy Chief, Information Assurance for the Intelligence Community

NATIONAL PARTNERSHIP FOR REINVENTING GOVERNMENT (NPR)

    Bob Stone - Energizer-in-Chief

UNITED STATES GOVERNMENT - OVERSEAS LOCATIONS:

AMERICAN EMBASSY - OTTAWA, CANADA

    Warren Nixon - Minister-Counselor for Administrative Affairs
    David Miller - Information Management Officer (IMO)
    Victoria Terry - Press Assistant, U.S. Information Service (USIS)
    Kyle Malone - Information Resources Center, U.S. Information Service (USIS)
    Buck Shinkman - Press Officer, U.S. Information Service (USIS)
    Robert Smolik - Minister-Counselor for Economic Affairs
    Justin Friedman - Political Officer
    Pedro Gustavo Erviti - Economic Officer

PARIS - AMERICAN EMBASSY AND U.S. MISSION TO THE OECD

    Ambassador Felix Rohatyn - American Ambassador
    Richard Morford - Deputy Permanent Representative to the OECD
    William Hudson - Minister-Counselor for Administrative Affairs
    Kevin Brennan - Minister-Counselor for Commercial Affairs
    Michael Parmly - Political Counselor
    Larry Corbert - Consul General and Consular Section American officers
    Miller Crouch - Public Affairs Officer, U.S. Information Service
    David Siefkin - Assistant Cultural Attaché
    Robert J. McAnneny - Director, Financial Services Center (FSC)
    Raymond Norris - Information Management Officer (IMO)
    Sherwood McGinnis - Political Officer
    Mid-Level Officers from the Political and Economic Sections and USIS

AMERICAN PRESENCE POST - LYON, FRANCE

    Stuart Dwyer - American Consul
    Eric Thouvenel - Chef de Cabinet to the Mayor, City of Lyon
    Pierre Helleputte - Head of International Division, Lyon Chamber of Commerce
    Renna Grieu-Bess, President, American Club of Lyon

VIENNA - AMERICAN EMBASSY AND MISSIONS (UNVIE AND OSCE)

       Steven White - Minister-Counselor for Administrative Affairs
       Terry Branstner - Information Management Officer (IMO)
       Allan Mustard - Agriculture Affairs Counselor - Foreign Agricultural Service
       Deborah Cavin - Political Officer
       Andrew Schilling - Deputy Director, Regional Program Office, U.S. Information
           Service
       David Buss - Administrative Officer (Missions to Multilateral Organizations)
       Gile Cavin - Consul General
       Information Management Staff
       John Feeney - Economic Officer
       Mark Fitzpatrick - Section Head, IAEA, Global non-Proliferation Policy
       Liz Krause - Ambassador's Secretary, UNVIE
       Kit Traub - Political Officer, UNVIE
       Jeffrey Hovenier, Political Officer, OSCE

AMERICAN CONSULATE GENERAL - FRANKFURT, GERMANY

       Hugh G. Hamilton - Consul General
       Hank Young - Director, Regional Services Center
       Sherril Pavin - Coordinator, AESOP (Administrative European Suite of
           Programs)
       Frank Pressley - Information Management Officer (IMO)
       Peter Bruzzese - IMO Staff
       Jim Van Derhoff - Director, Regional Information Management Center (RIMC)
       Frank Swain - RIMC Deputy Director
       Bobby Balderas - Chief, Digital Section, RIMC
       Victor Ratemanis - Engineering Services Center, Information Systems Security
       Cliff Brzozowski - Chief, Information Programs Office (IPO)
       Tom Phelan - Systems Chief, Information Management Office
       Chris Gustavis - Training Officer, RIMC

FOREIGN GOVERNMENTS:

CANADIAN MINISTRY OF FOREIGN AFFAIRS AND INTERNATIONAL TRADE

       George Haynal - Assistant Deputy Minister, Americas
       Lucie Edwards - Associate Deputy Minister, Corporate Services
       Colin Robertson - Director General, Communications Bureau
       David G. Ryan - Chief Information Officer and Director General,
           Information Management and Technology Bureau
       Donald Caldwell - Director, Client Services Division, Information Management
           and Technology Bureau

UNIVERSITIES:

HARVARD UNIVERSITY

John F. Kennedy School of Government

      Jerry Mechling - Adjunct Lecturer in Public Policy and
            Director of the Program on Strategic Computing and
            Telecommunications in the Public Sector
      Elaine Kamarck - Lecturer in Public Policy and
            Executive Director, Visions Project
      Jane Fountain - Associate Professor of Public Policy
      Deborah Hurley - Director, Harvard Information Infrastructure Project
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