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October 24, 1996

To: Members of the Committee on the Budget

From: The Committee Secretary

Subject: **Information Technology - Strategy for the Fund**

        The attached paper on information technology will be taken up at a meeting of the Committee scheduled for Thursday, November 7, 1996 at 2:30 p.m. in Committee Room 12-120.

        Mr. Stuart (ext. 34579) or Mr. L. Wolfe (ext. 37502) is available to answer technical or factual questions relating to this paper prior to the discussion.

Att: (1)

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Members of the Executive Board

INTERNATIONAL MONETARY FUND

Information Technology—Strategy for the Fund

Prepared by the Information Technology Policy Committee
and the Office of Budget and Planning

(In consultation with the Bureau of Computing Services)

Approved by Brian Stuart and Lindsay Wolfe

October 23, 1996

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SUMMARY

The Fund's effort to meet the changing and growing needs of the membership is increasingly being facilitated through the use of information technology (IT).[1] This has required the investment of considerable funds in the electronic data processing area as well as in communications, including telephone, telegraph and cables, and more recently external E-mail and the World Wide Web. Investment in IT provides the staff, management, and the Executive Board with working tools that will increase effectiveness and improve the institution's ability to meet the prospective demands of members.

During the past few years, there has been a rapid increase in the rate of technological change in the marketplace, and the pace of change is expected to accelerate in the next few years. Given the likely costs of these changes and the many alternatives available, in mid-1995 management determined that there was a need for a Fund-wide group which would, on an ongoing basis, review IT issues and provide policy advice in this area.

Accordingly, in September 1995, management formed a Fund-wide Information Technology Policy Committee (ITPC)[2] to advise on appropriate IT directions and initiatives for the Fund. As a first priority management asked the ITPC, with assistance from outside consultants, to undertake a study of opportunities for increasing the effectiveness of the Fund's IT infrastructure and operations. The committee reviewed seven proposals received in response to its statement of work dated November 17, 1995 and, at the end of December 1995, selected the Computer Sciences Corporation (CSC) to conduct the study.

The purpose of this paper is to brief the Committee on the Budget on the findings and possible cost implications of the results of the two-part CSC study, which was completed in June 1996. The first phase of the study provided a review and comparative analysis of the Fund's present IT environment. The second phase built on these findings and outlined a five-year strategic plan for the development and management of the Fund's IT resources.

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[1]Information Technology comprises all technology issues (computer, communications, and related technologies) associated with the acquisition, transformation, management, and dissemination of information (data, text, images, voice, and graphics including multimedia) by the Fund.

[2]The ITPC is chaired by Mr. Stuart (WHD) and comprises permanent representation from BCS, OBP, STA and WP&T and representation on a rotating basis from two area departments (SEA and EU1), two functional departments (FAD and TRE), and two support/ administrative departments (ADM and SEC).

I. ASSESSMENT OF THE FUND'S IT ENVIRONMENT

1.   In the assessment phase of the study, the consultants collected and analyzed information from a number of sources. Internally, the consultants reviewed more than 150 documents relating to IT issues in the Fund and conducted over 45 interviews and briefings and 6 workshops with Fund staff representing both IT service providers and end users. In total, approximately 200 staff members representing all grade levels, 22 departments, management, and several Executive Directors' offices participated in the fact-finding phase. Externally, the consultants collected information on "best practices" and indicators of IT activities in 13 assessment categories in peer organizations such as the IBRD and the OECD, and a wide range of financial, government and academic organizations.

2.   The first phase report noted the Fund's excellent computer network and infrastructure and concluded that the full deployment of Windows and related software would provide a solid platform for meeting current demands in the Fund and a good foundation for further expansion. At the same time, the report documented the absence of a user-based Fund-wide approach to IT policies and issues, a fragmented departmental approach to project planning leading to inefficient systems with overlapping data and functionality, dissatisfaction among some of the end users, difficulties in meeting certain project schedules and budgets, inefficient work practices and missed opportunities for increasing productivity.

3.   More specifically, the consultants found that many of the Fund's major applications—such as STA's Economic Information System (EIS), the Millennium accounting system, and the Travel Scheduling System (TSS)—rely on outdated technology. The consultants found a number of these systems to be costly to maintain, difficult to use, and inadequate to the Fund's information processing and management needs. The report also highlighted important gaps in the Fund's use of information technology—particularly in the area of documents, where numerous opportunities exist to use technology to improve institutional memory and streamline the preparation, review, storage, retrieval and dissemination of the Fund's documents and publications.

4.   The results of the quantitative comparator or "benchmarking" exercise were mixed, given the difficulty of making precise comparisons across organizations and companies. The study suggested, however, that IT costs (both per staff member and as a percentage of the Fund's total administrative budget) are somewhat above the average of those in other infocentric organizations, including the World Bank and OECD. Relatively high IT outlays reflect the costs of maintaining outdated "legacy" applications and relatively high service levels in the Fund (e.g., the response time to reported computer-or network-related problems is very rapid by industry standards).

5.   To address these issues, the report recommended a more integrated Fund-wide approach to IT planning and management; greater input from and accountability of users in the selection and management of IT projects; better communications and a more collaborative partnership between IT providers and users; the use of more rigorous project management and

systems development techniques; and more systematic work practice reviews to ensure that technology is used to streamline, not just automate, existing business processes that in many cases are no longer efficient. A key recommendation is that the Fund develop an integrated portfolio of application systems that meet today's information management needs, reduce data access and duplication problems, and eliminate reliance on outdated, unsupported technologies and the World Bank mainframe computer. This would mean replacing many of the Fund's existing major applications, such as EIS, TSS and Millennium, as well as developing new applications to meet departmental and institutional document and publication preparation and management needs.

II. FIVE-YEAR STRATEGIC PLAN

6.   In broad terms, the goal or "vision" of the five-year IT strategy has three key elements. The first is to strive for *secure anytime, anywhere online access to Fund information* by management, Executive Directors and authorized staff (both at headquarters and abroad), member country authorities, and the public. The second element is to *streamline the Fund's work practices* to make more effective use of IT. The third element is to *improve IT decision making, and organize and operate the Fund's IT resources more effectively*, ensuring that the Fund's IT environment reflects industry best practices.

7.   To achieve these goals, CSC together with the ITPC developed a five-year strategic plan for strengthening the Fund's information technology environment and operations. The plan is divided into four major subprograms comprising a total of 39 individual initiatives. Taken together, these initiatives would change the approach to IT in the Fund—away from what has tended to be a technology-based approach driven mainly by the IT-providing departments, to one that is driven in the main by IT users in support of more clearly defined goals and objectives. Execution of the plan would develop new application systems to improve the management and accessibility of information, replace outdated applications and, more generally, ensure the cost-effective use of technology by streamlining work practices, improving project management, and routinely benchmarking the cost of IT services in the Fund.

8.   The first of the four major programs, *IT Planning and Management*, comprises initiatives that would change the way IT decisions are made and the way IT projects are evaluated and implemented. Specifically:

- the ITPC would be rechartered to give it continuing responsibility for setting broad IT objectives and strategies and for advising management on IT priorities;

- IT decisions would be guided by a set of principles to help ensure that priorities in the IT area are decided from a Fund-wide perspective and are aligned with the Fund's main operational or "business" objectives;

- staff in user departments ("business managers") would work in partnership with IT-providing departments to take a leadership role in applying IT solutions, would be responsible for overseeing the implementation of IT projects, and would be accountable for the results of such projects;

- standard methodologies and techniques for developing and implementing applications would be applied more uniformly to help ensure that projects are delivered on time and within budget; and

- all IT projects would include an assessment of work practices and the way that IT could be applied to support improvements in those practices.

9.   The second major program, *Information Management*, addresses the need to replace outmoded systems and develop new applications to improve the accessibility of information and support the building of institutional memory in the Fund. The initiatives in this program focus on integrating and improving the accessibility of the key knowledge assets of the Fund, including internal documents, publications, economic and financial information, and administrative information. These initiatives would result in the development of new or replacement systems to enhance:

- the management of departmental and institutional documents, from their creation to their disposition;

- the integration and sharing of country and cross-country economic information;

- the management of information on financial transactions between the Fund and its members; and

- the integration and management of administrative information, including personnel- and travel-related information, and the Fund's administrative accounting system.

10.   The third major program, *IT Services to Members and the Public*, would improve the availability of information to the Fund's members and the general public. The initiatives in this program would:

- build on existing communications capabilities and explore the use of the Internet to facilitate secure, timely and reliable electronic exchanges of information between the Fund and its members;

- enhance support for the Annual and Interim Committee Meetings and the operations of the IMF Institute, providing streamlined procedures and improved services to representatives of member governments; and

- improve the accessibility of published Fund documents to the general public.

11. The fourth of the major programs, *IT Services within the Fund*, would address the need to maintain and expand the IT infrastructure—the Fund's microcomputers, data network, voice communications, video conferencing capabilities, and peripherals such as printers and photocopiers. The initiatives in this program would:

- increase the pace at which new technologies are adopted in the Fund;

- improve electronic access to headquarters-based information from remote sites such as home, and mission and resident representative sites;

- establish a program of ongoing reviews of and enhancements to the external information resources (e.g., real-time news and financial wires) needed by staff, management and Executive Directors; and

- strengthen end-user support by improving the dissemination of information on IT activities and initiatives, enhancing the mechanisms used to gauge user satisfaction, and reviewing and modifying, as appropriate, user service levels.

III. IMPLICATIONS AND NEXT STEPS

12. The five-year strategic plan has been reviewed by Fund departments, bureaus and offices, and they support the proposed approach to IT. Management also endorses the thrust of the conclusions and recommendations, and has called for moving ahead quickly to strengthen the role of the ITPC and its supporting committees in information technology planning and management, and to consider concrete proposals for implementing key elements of the strategic plan.

13. CSC has made preliminary estimates of the cost of implementing the initiatives outlined in the strategic plan, which suggest an incremental cost of approximately $46 million over the coming five-year period, or about $9 million a year.[3] More detailed estimates of the costs, together with an assessment of the specific benefits to be derived from the IT investments, would be made prior to undertaking the individual projects. By way of background, Fund expenditures (administrative and capital) for IT are budgeted to be nearly $52 million in FY 1997; most of this amount is for EDP expenditures ($38 million) with the remainder ($14 million) for communications and other technology-related expenses.

14. The views of the committee on the proposed IT strategy would be appreciated.

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[3]Our experience in the Fund and in the industry generally is that actual expenses for major technology projects frequently exceed the preliminary estimates.