

BACKGROUND FOR EDITORS

DIGITAL'S ALL-IN-1 BUSINESS INTELLIGENCE STRATEGY: INTEGRATED EXECUTIVE AND DECISION SUPPORT FOR THE '90S

A new generation of computing applications for business professionals is emerging. The 1990s will bring intelligent applications to the executive's and professional's desktop -- applications that go far beyond simple decision support to take full advantage of technologies like object-orientation, network-based services, and distributed data -- enabling these users to gain insight into the information that represents their business, and allowing them to improve the performance of their enterprise. Digital and leading consultants have termed this computing capability "Business Intelligence."

As a key component of ALL-IN-1 Phase II, Digital's office computing strategy for the '90s, Business Intelligence applications address professionals' needs for accessing and analyzing information, and sharing their decisions with others, throughout a world-wide network. By integrating Business Intelligence applications with other products in the ALL-IN-1 Phase II family, and by building these applications on Network Application Support, Digital has redefined traditional decision support, and has brought it into the next decade.

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Shifting Roles: IS as Business Partner, End-User as Developer

Today's business professional is now facing a dilemma: the use of computing to gain a competitive advantage is rapidly becoming a competitive imperative, and the professional is becoming increasingly dependent on information technology -- but he or she can be unwilling or unable to learn this technology. And Information Systems (IS) departments are often overwhelmed with demands to deliver solutions custom-built to the specifications of the business professional.

As a result, computing for business professionals has become bipolar. On the desk, users can address their local needs with isolated tools like personal databases and desktop publishing systems. From the glass room, IS manages projects to deliver electronic reports and messaging systems. The two domains can be largely unrelated, and each can be unsatisfied.

From this dichotomy, the next generation of professional computing is emerging, a generation in which the role of IS and end-user will shift. The IS department is evolving into an information consultant that helps users run their business. It will provide the business communications backbone for delivering information to any user who needs it -- extending the office network beyond the local area to become the source of information, communications, and systems management throughout the enterprise. With this backbone in place to keep track of the location and format of documents, databases, and people, IS will then help solve users' needs by providing powerful but easy-to-use tools that allow access to information inside and outside the enterprise.

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With these tools, the end user will be able to develop specialized applications. Business professionals will be able to create documents containing images, voice, live data, and charts as well as text; analyze the information to gain insight into his or her business; and communicate with other professionals within the enterprise or with customers and suppliers.

Profession-Specific Application Environment. Just as powerful workstations have enabled computers to be used for engineering design, they will also enable the emergence of object-oriented end-user environments tuned to the needs of specific types of business professionals. As engineers today can design a bridge using a CAD system that speaks the language of materials and mechanics, business professionals will be able to use tools that speak the language of a particular business, and that adapt to the style and needs of the business professional. Executive Support Systems are an early example of this type of profession-specific application environment.

The emergence of these environments will make the access and analysis of complex information intuitive; users will not have to be concerned with continuously learning new technology, and can instead create new applications that help them run their business. And this will enable IS to concentrate on its new role as consultant and business partner.

Bringing Computing for Professionals into the '90s

Digital's ALL-IN-1 Business Intelligence solutions give business professionals simple, intuitive tools that let them satisfy their own ad-hoc requests and pursue their own lines of questioning, rather than just look at a static set of reports.

These solutions deliver a superior level of integration with data sources, other applications, and office services. ALL-IN-1 Business Intelligence applications can exchange information seamlessly with other applications, access data from remote Digital and IBM databases and deliver it to the desktop, and integrate into the enterprise's network and information flow.

Today, Digital and leading ISVs (Independent Software Vendors) provide a range of innovative ALL-IN-1 Business Intelligence applications that serve diverse user needs, and advance the state of the art in usability for business professionals. Digital's DECdecision and Cognos' PowerPlay provide data access and reporting capabilities. Integrated spreadsheets for workstations, PCs, and terminals are available with DECdecision and Access Technology's 20/20. EFFEM Services' Acumate, IRI's EXPRESS, and Execucom's Paradigm offer advanced decision-support modeling. Insight into sales and marketing performance is also afforded by Acumate and EXPRESS. Profession-specific executive support is provided by Execucom's Executive Edge and Comshare's Commander EIS. And over time, the ALL-IN-1 Business Intelligence portfolio will expand with enhanced solutions from PC market-leaders like Lotus and Ashton-Tate.

Users of these solutions have seamless integration with other ALL-IN-1 Phase II office applications and services, including electronic messaging and group conferencing; as a result, insight gained through Business Intelligence can be communicated throughout the enterprise. And in the future, Business Intelligence applications will become even more tightly integrated into the ALL-IN-1 environment.

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Network Application Support Delivers the Business Intelligence Environment

Digital's Network Application Support (NAS) delivers the environment for Business Intelligence solutions, allowing the deployment of these solutions throughout the network and across different systems from different vendors. Three key NAS services that provide the foundation for Business Intelligence include Data Access Services, Compound Document Services, and Application Control Services. Figure 1 depicts this environment.

Data Access Services are a set of application programming interfaces (APIs) that connect applications to data, regardless of data source or type. The first of these services is Digital's VAX SQL/Services. VAX SQL/Services allows the deployment of a common SQL API throughout the network, to provide transparent access to local and remote VAX Rdb/VMS databases from VMS and ULTRIX workstations and MS-DOS PCs. And in conjunction with Digital's interoperability tools like VIDA for DB2 and VAXlink, VAX SQL/Services allows access to remote IBM databases.

Compound Document Services based on CDA (Compound Document Architecture) are a cornerstone of ALL-IN-1 Business Intelligence solutions, enabling the exchange of revisable compound information between applications. CDA is built on two key interchange formats: DDIF (Digital Document Interchange Format) and DTIF (Digital Tabular Interchange Format). DDIF allows the seamless interchange of text, graphics, and image information into revisable compound documents; DTIF allows the integration of spreadsheet and tabular data into revisable compound documents, while preserving the underlying formulas. By using the unique capabilities of Compound Document Services, ALL-IN-1 Business Intelligence applications allow different types of information to be interchanged between a variety of platforms, and brought together in a single, revisable compound document.

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And Application Control Services place Digital at the leading edge of object-oriented technology, which plays an integral role in ALL-IN-1 Business Intelligence solutions. Object-oriented systems combine data and the application needed to operate on it, into a single logical entity, or object. This "role-specialization" simplifies the creation of complex and sophisticated tasks, and allows the development of more intelligent systems for business professionals.

Through Application Control Services like BUILDER and the LiveLink function, Digital addresses the need for a consistent object-oriented environment that integrates different objects from other multiple across a customer's global network.

DECdecision and DECwrite: Leading Examples of Intelligent Applications

DECdecision and DECwrite are two exciting DECwindows applications from Digital that deliver the benefits of the ALL-IN-1 Business Intelligence strategy today.

DECdecision is made up of three integrated components: ACCESS, CALC, and CHART. Each component can work independently, or work together to retrieve, analyze, and report information. ACCESS provides extensive distributed data access to local and remote data on the network. CALC is a full-function spreadsheet with an internal macro language, sophisticated consolidation and linking capabilities, and many mathematical, financial, and statistical functions. CHART provides pre-defined chart and graph types, and overlay and annotation features.

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In addition to these components, DECdecision includes the integrated BUILDER Application Control Service, which allows users to record the interaction of DECdecision objects, creating new objects that can be replayed at any time. Users of BUILDER can combine existing objects with additional objects to create new end-user applications. These BUILDER applications can be mailed throughout the network, allowing other users to run them or include them as parts of other applications.

DECwrite is Digital's compound document editor that allows the inclusion of text, graphics, and images into a single revisable compound document. Using its LiveLink capabilities, DECwrite lets the user dynamically link DECdecision information into a document. When the source data changes, the information in the document will be updated to reflect the change. When a user chooses to alter DECdecision information within a DECwrite document, the DECdecision object -- the source data and the application operating on it -- is automatically invoked.

In an August 1989 report, Patricia Seybold's Office Computing Group stated that "the advantages of DECdecision are the functionality of its modules, its relationship with DECwrite, and the underlying architecture that gives DECdecision access to services and applications across the network," and, "Architecturally, Digital is ahead of the game with its Compound Document Architecture and Application Control Services." The benefits of this technology are tremendous: users are given unprecedented integration and flexibility to access data, analyze it, display it in graphic form, and even automate the process. All this can then be incorporated into documents for printing or mailing to others.

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With the advent of Application Control Services, more and more applications will begin to offer this kind of flexibility and integration. Objects will be specialized and intelligent. With facilities akin to BUILDER, business professionals will be able to easily glue together different objects to create new applications, even objects that may never have been explicitly designed to work together. These applications will speak the language of business, and be inherently distributable across different systems from different vendors.

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Note to Editors:

Business Intelligence, ALL-IN-1, CDA, DDIF, DEC, DECdecision, DECwindows, DECwrite, DTIF, VAX, VAX Rdb/VMS, VAX SQL/Services, VIDA, VMS, and VT are trademarks of Digital Equipment Corporation.

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ALL-IN-1 Business Intelligence Environment

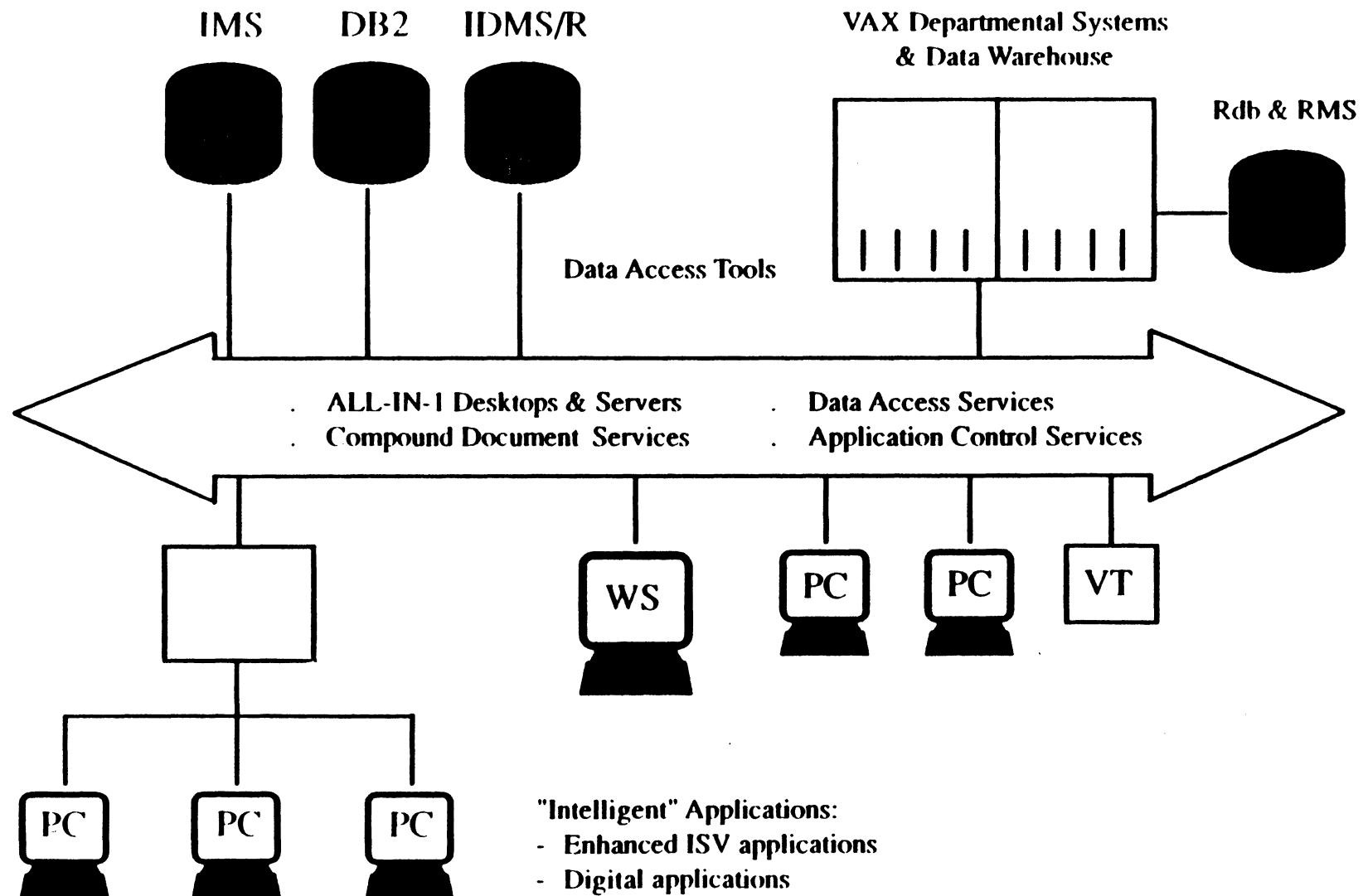


Figure 1 -- The ALL-IN-1 Business Intelligence Environment