

Competitive Analysis

Lotus[®]

Approach

97^{EDITION}

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Why Choose Approach 97?

The best database for today's connected world.

Lotus® Approach® is known throughout the industry for delivering the best combination of ease-of-use and power in the desktop database category. There are other products that are almost as simple to use, but they do not come close to delivering the robust functionality of Approach. Likewise, there are other products that offer equally powerful application development facilities, but they are not nearly as easy to use.

Because it is both powerful *and* easy to use, Approach appeals to a very broad audience. General business users locate exactly the data they need and produce sophisticated reports in minutes. Analysts and managers create revealing crosstabs and charts that lead to better decision-making. Programmers build custom business solutions that involve multiple data sources and applications. And *everyone* works in an environment that is intuitive and productive, regardless of their proficiency level or the task they are performing.

In addition to its trademark combination of power and usability, Approach is truly the best database for today's connected world. It offers the highest level of client/server integration with market-leading databases. It is strategically integrated with Lotus Notes® for developing and distributing groupware applications. And it provides the most extensive Internet integration for leveraging world-wide connectivity and information resources.

This document compares these and other Approach capabilities to both Microsoft Access 97 and Corel/Borland Paradox 7 — clearly confirming why Lotus Approach 97 is best in its class.

Database Trends & Evaluation Criteria

Several trends have had an important impact on the market's expectations for desktop database software today. First, company downsizing has left database users with the need to be more productive on their own and to satisfy their changing requirements with less IS/IT assistance. This means that a database needs to be easy and intuitive for *all* levels of users, including programmers who, like anyone else, are more productive when their development tools are both powerful *and* easy to use. Independent market research shows that ease of use is almost twice as important as any other capability when it comes to selecting a desktop database.

Second, seamless integration with heterogeneous data sources has become a fundamental requirement for desktop database systems. Networks, file servers, open systems, and ODBC have made it possible to work with corporate data *directly*, instead of copying or importing it to the PC. And even within a single organization, data might exist in a multitude of formats, such as dBASE, DB2®, Oracle, or Lotus Notes. For desktop databases to survive in the corporate world, they must be open-ended and efficient when it comes to heterogeneous database connectivity.

A third factor influencing user requirements is customization. Business users spend most of their time working with a custom-built application, rather than using the database system in an ad-hoc manner. The application contains all the reports, forms, charts, and programming scripts needed by the user. As a result, it is imperative that the database system provide ample and intuitive tools for building both simple and highly complex custom business solutions.

Fourth, there is, of course, the information highway. If you asked a hundred people from a hundred different walks of life what new trend has had the greatest impact in the 1990s, the vast majority of them would quickly and emphatically respond "The Internet". And the nickname "the information highway" is very appropriate, because when it comes right down to it, information sharing is what the Internet is all about. The same can, of course, be said for databases. Because of this common bond, there is a natural desire to marry the Internet/intranets with database products. Information stored in databases longs to be published to the Web. Web browsers search the world for data stored in back-end databases. The integration possibilities are endless, and all database vendors must deliver solutions in this area to remain competitive.

The fifth major trend that is changing the shape of desktop databases is the rapid growth of team computing. In corporate computing environments, the notion that "no man is an island" has never been more true than it is today. By their very nature, databases, in particular, call for sharing and collaboration. Corporate data is stored centrally on servers, and everyone on the team connects to it. The results of working with the data, such as reports and charts, need to be routed on to others for review. And the client applications themselves must frequently be distributed to team members, so they can execute locally from their own PC. Desktop databases must actively and seamlessly participate in the collaborative information cycle, or they will find themselves left out completely.

To summarize the impact of these trends on the desktop database market, databases must be strong in the following key areas in order to meet the challenging and evolving requirements of today's business users:

- Productivity: Getting Work Done Quickly and Easily
- The Internet/Intranet at Work
- Staying Connected: Collaboration Made Easy
- Information You Need: Anytime, Anywhere
- Customization: Working the Way You Want and Creating Custom Solutions

Lotus has listened to the needs of the marketplace and has responded with a new release of Approach that builds on a tradition of award-winning usability, yet reflects the many new ways that people work today.

Lotus Approach 97. The best database for today's connected world.

Productivity: Getting Work Done Quickly and Easily

It is a nearly uncontested fact that Lotus Approach is in a league of its own when it comes to ease of use. Here are just a few quotes from a variety of critics which lend credence to this claim:

“A great combination of simplicity and power...” *PC Magazine*, May 1996

“Approach was our usability testers’ favorite, hands down.” *PC World*, July 1996

“If there’s an effective database product that surpasses all others in ease of use, it’s Lotus Approach 96.” *PC Magazine*, May 1996

“Lotus Approach 96 focuses on one of software’s hardest tasks — persuading non-experts that databases are easy.” Ziff Davis, June 1996

Approach has earned its reputation as the most highly usable database product due to its superior user interface and a variety of unique, innovative user-oriented features, including:

- **Head-start form creation** — Right from the start, Approach presents a working environment that is far easier to master than Access or Paradox. When a user opens a data file for the first time, an intuitive, fully-functional form is automatically generated and displayed. You can start browsing the database immediately. With Access and Paradox, it takes multiple, distinct steps to get to a similar starting point, and those steps are not obvious to new users.
- **Superior Assistants** — Approach, Access, and Paradox all offer some form of step-by-step assistants to guide users through complex tasks such as reporting and form creation. However, the Approach Assistants are much easier to use due to the notetabs that help users immediately see how many steps are involved in the process. Using the notetabs, users can also easily navigate from one step to another, moving either forwards and backwards, and skipping over any steps that are unimportant to them. In general, Access Wizards are less flexible than Approach Assistants and, as is particularly true in the case of the Query Wizard, are less intuitive.

Paradox Experts are also significantly less helpful than Approach Assistants. They provide few style and layout options, and offer limited power and flexibility. For example, Experts don’t allow users to combine data from more than two tables in any one view, such as a form or report. And, Paradox does not even offer Experts to assist in performing queries or crosstabs — traditionally some of the most complex and difficult tasks for users.















- **InfoBox** — Approach, Access, and Paradox all let users invoke some sort of utility to tweak the properties of application objects (forms, reports, fields, text objects, etc.), but these utilities differ widely in terms of usability and power. For example, while the Approach InfoBox uses colorful, graphical representations of properties that help users quickly understand their meaning and values, the Access property box shows an object’s properties using a highly unintuitive monotone, fill-in-the-blank list. Even colors are represented by numbers in Access.

Regarding Paradox, unlike the compact Approach InfoBox, the Paradox property box is quite large, making it difficult for users to see application objects while they customize them. In addition, the Paradox property box is extremely limited in terms of the functionality it provides users. For example, Paradox property boxes provide no mechanism for assigning styles using style sheets, creating and attaching macros to objects, designating the precise size of objects, and more — all of which are standard capabilities in the Approach InfoBox.

Finally, the Approach InfoBox is the only one that makes users' modifications immediately, so that they can see their changes as they apply them. With Access and Paradox, changes are not made until users close the property box, making it cumbersome to try out different options and see what works best.

- **PowerClick Reporting** - Approach is in a class by itself when it comes to true WYSIWYG reporting. During design, Approach displays the data from a user's report as it will actually appear in print. Access and Paradox display cryptic, symbolic representations of data, making it difficult to see what a report will look like, or to size columns based on the actual data. With Approach, users can also calculate a variety of summaries or change the sort order with a single click and see the results immediately. No other reportwriter is as true to WYSIWYG principles as Lotus Approach.
- **Analytical capabilities** - In addition to offering an intuitive Assistant for building crosstabs, Approach lets users build crosstabs dynamically by simply dragging and dropping fields from a worksheet. Approach also lets users build a chart with a single mouse click from a crosstab, and lets them drill down to the underlying data comprising any summary on a crosstab or chart. Access and Paradox provide none of these powerful capabilities. To create a crosstab in Access, users must go through the Crosstab Wizard, which is mysteriously hidden in the query section. And Paradox forces users to build crosstabs completely from scratch without the help of an assistant.

Productivity	Lotus Approach	Microsoft Access	Corel Paradox
SmartMasters™ for head-start application development	✓	✓	✓ Limited selection
Automatic form creation upon opening a new table	✓	☞	☞
InfoBox for easy customization of all objects	✓	✓ Highly unintuitive	✓ Changes not applied immediately
True WYSIWYG InfoBox	✓	☞	☞
Assistants/Wizards for simplification of complex tasks	✓	✓ Less flexible	✓ Less powerful
Find Assistant for step-by-step assistance with complex queries	✓	✓ Less intuitive	☞

Productivity	Lotus Approach	Microsoft Access	Corel Paradox
SmartIcons® for operators (i.e., <, >, <=, >=) in query-by-form	✓		 No query-by-form
Preprogrammed queries (i.e., find duplicates, top values, etc.)	✓	✓ Fewer options	
Report Assistant for step-by-step creation of reports	✓	✓ Less flexible	✓ Fewer layouts and styles
PowerClick reporting	✓	 Not true WYSIWYG	 Not true WYSIWYG
Report groups by subsets of field values	✓		
Crosstab Assistant for step-by-step creation of crosstab	✓	✓ Fewer fields per dimension	
Easy, drag-and-drop crosstab creation from worksheet	✓		
Drill-down to data from chart or crosstab	✓		
Single-click charting from crosstab	✓		

The Internet/Intranet at Work

Because databases and the Internet/intranets are both fueled by information, there is a natural desire on the part of users to integrate the two environments and leverage the strengths of both for managing, sharing, and distributing information. Both Approach and Access provide capabilities for leveraging the Internet, although Approach takes Internet integration a few steps further. Paradox provides no Internet integration capabilities. Users can't publish forms or reports to the Web, nor can they leverage any of Paradox's data storage or querying functionality on the Internet.

- **Publishing Forms and Reports** — Both Approach and Access provide similar capabilities when it comes to publishing database views such as forms and reports to the Internet. Both can take either a form or report, and generate a local HTML document that resembles the original view. Approach provides the added capability of immediately publishing the document to an FTP server, all with a single mouse click. Paradox provides no HTML publishing capabilities.
- **Building an interactive Web site** — Both Approach and Access can be used to create Web pages that will dynamically interact with live data on a server when invoked from a Web browser. Businesses can use this technology to give their customers easy and direct connectivity to their data. For example, a video store chain might use this technology to let customers browse an inventory database over the Internet to see if their favorite movie is checked out, and to reserve it if it is available. Paradox does not provide any capability like this.
- **Single-click Internet connectivity** — More and more, users are treating the Internet almost like the telephone — they use it a number of times throughout the day depending on the need, and then quickly return to whatever they were doing before the need arose. To facilitate this behavior, Approach provides links that give users single-click connectivity to the Internet. By clicking on a SmartIcon, users are immediately transported to the Lotus home page, where they can seek technical assistance or simply browse product lines. Users can also highlight a word from anywhere within Approach and again, with a single click, perform a Web search to locate sites that feature that topic.

Access provides some of these same capabilities, although not all. Paradox provides no instant gateways to the Internet.

- **Catalog favorite sites with SurfNet database** — Databases are naturally adept at locating information based on supplied keywords. Only Approach 97 includes a ready-made application that can be used to catalog Web sites, locate them quickly, and visit them with a single click. With SurfNet, users can log their favorite Web sites and categorize them using keywords that are sensible and meaningful to them. This saves a significant amount of time when it comes to searching for the sites they are interested in, since they don't have to browse through the multitude of Web sites that may have been selected through a standard browser search. Then users can visit the Web site with a single click from within the SurfNet application. Their favorite browser will be launched, and the site's URL will be passed to the browser.

- **Sharing information over the Internet** — Approach 97’s “Save As... to the Internet” and “Open to ...the Internet” features let users easily distribute and work with Approach applications over the Internet. The “Save As” features let users save a compact bundle of data and views from an Approach application to the Internet using the standard File - Save command. Both application and data are compressed into a single file, making it easy and practical to distribute. The Open command is then issued by other users who need to retrieve the application. Access and Paradox offer no similar features.

Internet/Intranet	Lotus Approach	Microsoft Access	Corel Paradox
Publish static views to the Internet	✓	✓	✘
Create interactive Web pages that dynamically access live data	✓	✓	✘
Text search on Internet of selected text block	✓	✘	✘
Single-click Web site connectivity	✓	✓	✘
Ready-made database application for cataloging and easily visiting favorite Web sites	✓	✘	✘
Easily and efficiently distribute complete database applications over the Internet	✓	✘	✘

Staying Connected: Collaboration Made Easy

In this category, there is very little to say about Microsoft Access or Corel Paradox. Through MAPI-compliant mail support, the applications provide very limited collaboration capabilities. Beyond that, sharing information must be done manually, and outside of the applications. Approach on the other hand features robust Team Computing features and tight integration with Lotus Notes, enabling users to initiate information-sharing directly from within the Approach environment.

- **Share results with TeamMail™** —TeamMail lets users mail messages that include Approach information using any VIM- or MAPI-compliant e-mail package, such as Lotus Notes or cc:Mail™, directly from within Approach. With TeamMail, users can easily mail or route a single record, a set of records, an entire database, or a blank version of the current database. They can also send a snapshot of an Approach report, chart, or other view to team members, enabling them to view an analysis without having to launch Approach or even have it installed. As a result, TeamMail speeds team decision-making, since users can share valuable, timely information without exporting or re-keying the data. It also reduces costs since users can share database analyses electronically rather than through delayed, expensive printed reports and graphs. Additionally, the ability to share snapshots of data reduces network requirements.

Paradox and Access provide simple MAPI-compliant mail support enabling users to attach objects such as tables, forms, or reports to e-mail messages. They don't provide routing capabilities, nor do they allow users to send snapshots of analyses for review.

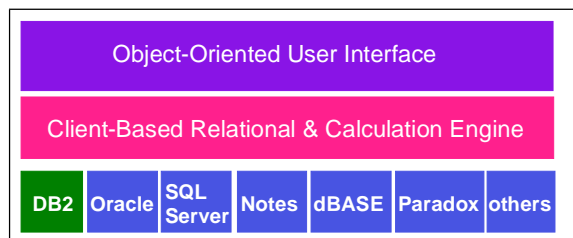
- **Build workflow applications using NotesFlow™** — NotesFlow is a collection of tools available in Notes™ Release 4 that allow application developers to customize workflow applications by adding Notes 4.0 commands to the Approach menus. Notes commands are associated with a given Notes form and automatically become available on the Approach Actions menu whenever Notes is used to launch an embedded Approach view of the Notes form. This feature increases productivity by giving users direct access to Notes menus from within Approach. It streamlines and speeds development of robust workgroup solutions that involve sophisticated workflow applications.

Staying Connected	Lotus Approach	Microsoft Access	Corel Paradox
Allow connectivity to shared data on a central server	✓	✓	✓
Provide integrated mail support	✓	✓ MAPI only	✓ MAPI only
Provide tools for distributing graphical snapshots of reports, charts, forms, and other views	✓	✘	✘
Provide integrated tools to facilitate the development of sophisticated workflow applications	✓	✘	✘

Information You Need: Anytime, Anywhere

Approach differs from Access and Paradox in one very significant and fundamental way that shapes virtually all aspects of database integration: it was designed from day one to be database-independent, whereas Access and Paradox were not. Access and Paradox were designed to work with their own proprietary data formats — a concept that is out of synch with today's world of networks and open systems.

Approach does not even *have* a proprietary data format. The Lotus philosophy when developing Approach was to deliver a better way of working with data, not storing it. Approach connects *directly* and *quickly* to almost all popular data formats, including 1-2-3®, dBASE, DB2, Oracle, Paradox, and Notes. As you can see below, Approach's architecture separates data connectivity from the database engine, so that any number of data formats can be easily supported, each looking and behaving exactly the same to the Approach user.



The key benefits resulting from Approach's superior design and methodology are:

- **Fast, direct connectivity** — Approach makes it simple and easy to start working with data, no matter what format it's in. Users just specify the appropriate database format and connection information, and are then connected *directly* and *immediately* to the chosen table. An Approach application is created automatically to get users up and running fast with the data.

With Access, users don't get the same level of connectivity as they do with Approach when working with data stored elsewhere. They have the option to import the external data into Access' proprietary format, or to "link" to the table, which is very different from Approach's direct connectivity. Field properties such as validation rules, lengths, and data types cannot be controlled by Access through a link. So users have access to the data values, but to little else when they are linked.

- ✧ Paradox's data connectivity capabilities are even more limited than those of Access. Out of the box, users can only directly open data stored in dBASE or Paradox. All non-dBASE and Paradox data must be imported before it can be accessed (unless ODBC or SQL drivers are purchased separately). And, the import options are sparse. Paradox only supports a handful of spreadsheet formats, and its native Paradox and dBASE data types. If users do connect to other data formats using third-party ODBC or SQL drivers, functionality is limited. For example, users can't join Paradox or dBASE tables to tables opened with ODBC or SQL drivers, so they can't construct queries or reports with related data stored in disparate formats.

- **Create new database tables** — Another major benefit of Approach's unique architecture is that it not only connects to, but can easily *create*, new tables in any of its supported formats. This gives users an easy, graphical means of creating new tables, and is unique to Approach. With Access, users must resort to programming to create new tables in external formats.
- **Preserve application investment with database conversion** — Related to the above is the ability to save data from one database format to another, which is extremely useful for downsizing or upsizing database systems. Both Approach and Access support this capability, however Approach takes it one giant step further. When users save data to a different format in Approach, their application can be saved with it, and hence, without doing a stitch of extra work, users can continue using the application with either of the data sources. This capability is invaluable for mobile computing applications, and environments where a variety of database formats have been deployed.

Paradox does not provide this helpful functionality. The only way to move Paradox data to a different database format is to export it, and the export options are extremely limited. In fact, you can only export Paradox data to either dBASE or Paradox formats.

- **Special features for DB2 users** — There is simply no better client tool for working with DB2 data than Lotus Approach 97. Approach 97 helps DB2 users preserve their investment in QMF by letting users execute QMF queries from within Approach, or automatically convert QMF queries and reports to Approach. Approach 97 also helps users leverage more features in DB2 through DB2 BLOB support, new commit/rollback capabilities, and new pass-through SQL.

Information Access	Lotus Approach	Microsoft Access	Corel Paradox
Ability to work with a variety of popular data formats	✓ Includes Lotus Notes Powerkey for maximum performance when working with Notes data	✓ MS Exchange & Outlook drivers not included — requires additional install of Office 97 ValuPack	✓
Complete connectivity to all popular data formats	✓	✘ Does not allow full control over data management unless data is imported to Access	✘ Highly restrictive capabilities
Create new database tables in any format	✓	✓ Requires programming	✘
Save to new tables in any database format	✓	✓	✘

Information Access	Lotus Approach	Microsoft Access	Corel Paradox
Seamless application/database independence	✓	👎	👎
Includes features designed specifically for DB2 users	✓ Automatic QMF conversion, support for DB2 BLOBs, integration with Net.Data, and more	👎	👎

Customization: Working the Way You Want and Creating Custom Solutions

There are many different levels of customizing an application, ranging from simply changing fonts and colors to adding automation with scripts and macros. We have already talked about how Approach compares with Access and Paradox when it comes to changing the look of a view or creating new views. In summary, we discovered that:

- The Approach InfoBox is far more intuitive than similar Access or Paradox utilities for customizing the properties of an object, such as font, size, color, position, format, or alignment.
- Approach Assistants, for building new views such as reports, forms, and charts, are easier to use and offer greater functionality and flexibility.
- Only Approach offers true WYSIWYG reporting, so that while users are designing reports, they see actual data and exactly how it will look in final print.

Below are some additional facts that distinguish Approach from Access and Paradox in the area of customization.

- **Better facilities for building tables from scratch** — It is possible in all three products to build a brand new database table by defining its fields and properties. However, as with the Approach InfoBox, the screen presented by Approach for defining fields is far more intuitive than that presented by Access or Paradox. Approach also offers a greater variety of preprogrammed options during field definition, such as declaring a field unique, or automatically assigning it a serial value, a record creation date, or a record modification date. No programming or expression-building is required to automatically achieve these results.
- **Point-and-click automation** — Neither Approach nor Access require users to program in order to automate a database application. Both products provide point-and-click macros that are simple enough for knowledgeable end users to work. What differentiates them is the flexibility they offer. Approach provides users with a set of macro commands, and lets them easily construct a custom macro based on their needs by simply pointing and clicking on as many commands as they would like. Access supplies predefined macro commands that cannot be mixed. While Access macros are as easy as Approach macros to choose and attach to objects, they do not provide as much flexibility in meeting custom needs. This means that Access users need to resort to a full-blown programming language more often than the Approach user, which might be beyond the user's skill set.

Paradox, on the other hand, provides no point-and-click automation capabilities. To automate tasks in Paradox, users must learn ObjectPAL, the integrated programming language for Paradox. To help users with this chore, Paradox software ships with a handy 500+ page programming manual!

- **Recorded Scripts/Macros** — When it comes to customizing an application, the only thing easier than point-and-click macros and visual programming is no programming at all. That's what you get with Approach 97, and there is nothing like it in Access or Paradox. Instead of writing code or even selecting commands with the mouse, Approach 97 lets users build macros and LotusScripts by actually performing the tasks they wish to automate. Users simply turn on the recorder, do whatever it is they're trying to represent in code, and turn off the recorder when they're done. The commands are automatically transcribed for them. Users can also easily convert Approach macros to scripts to accommodate changing programming needs.

Customization	Lotus Approach	Microsoft Access	Corel Paradox
InfoBox for easy customization of all objects	✓	✓ Highly unintuitive	✓ Changes aren't automatically applied
Assistants/Wizards for quickly building forms, reports, and other views	✓	✓ Less flexible	✓ No find or crosstab assistant
True WYSIWYG reporting for fast, precise report editing	✓	☹	☹
Build custom databases from scratch	✓	✓ Less intuitive, fewer options	✓ Less intuitive, fewer options
Variety of built-in field validation and default values	✓	☹	☹
Point-and-Click Macro creation	✓	✓ Less flexible, fewer options	☹
Custom Macro creation to meet exact needs	✓	☹	☹
Visual programming language support	✓	✓	✓
Macro/Script recorder	✓	☹	☹
Macro/Script converter	✓	☹	☹

Summary

Thank you for evaluating Lotus Approach 97. We hope we have convinced you that Approach is superior to all others in its class, offering the best combination of power and ease-of-use; the highest level of client/server integration with leading databases; unique integration with Lotus Notes for an advantage in developing and distributing groupware applications; and the most extensive Internet integration for leveraging worldwide connectivity and information resources. In short, we hope you have decided that Approach is the best database for *your* connected world.

System Requirements

Hardware

- IBM® PC or compatible (80486/50 MHz or higher).
- Windows-compatible video adapter (VGA or higher) and monitor.
- CD-ROM drive or 3.5" high-density disk drive.
- Mouse or other pointing device.

Operating System

- Microsoft Windows 95 or Microsoft Windows NT 4.0.

Memory

- 8MB RAM minimum.

Disk Space

- 20MB RAM minimum; 45MB for full installation.
- Users can run the application from the CD-ROM.

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