

# ACI 4D Productivity Plug-ins: The office system inside 4D and 4D Server

A D PRODUCTIVITY PLUG-INS are a complete cross-platform office system operating inside 4th Dimension or 4D Server. They behave as compound database objects and include:

- ► 4D Calc, a spreadsheet designed for analysis, simulation, review, and forecasting of numerical data.
- ► 4D Draw, a drawing plug-in that creates diagrams, floor plans, technical illustrations, engineering documents, architectural blueprints, and more.
- ► 4D Write, a simple, elegant tool for creating and modifying all types of textual documents, from simple letters to multi-part contracts.

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ACI incorporated a 4D Write area within this production database to create the PDF and HTML documentation for all 4D commands.

#### FEATURES

All 4D Plug-ins are complete products and are designed to provide the most needed features in their respective product categories.

#### **4D** integration

4D Calc, 4D Draw, and 4D Write can be used in their own windows or placed on 4D forms. The contents of a 4D Plug-in can be saved as a document or stored directly in a record as a 4D field. Plug-ins can directly reference 4D objects such as fields, variables, commands, methods, and other plug-ins.

#### **4D Server integration**

The 4D Server integrated application services provide immediate automatic updates of all plug-ins contained within a 4D Server database for any 4D client connected to 4D Server.

#### **Communication between 4D Plug-ins**

4D Plug-ins communicate with each other using the internal 4D hotlink system. With hotlinks, changes in the original formation are reflected everywhere dynamically.

#### Programmability

When a 4D Plug-in is added to a database, a complete suite of commands is installed that enable designers to control all aspects of plug-in usage. Combined with the 4D language, these additional plug-in commands allow you to create sophisticated office applications within your database or your client-server architecture.

### 4D Draw

### 4D Write

4D Draw is a drawing plug-in that creates diagrams, floor plans, technical illustrations, engineering documents, architectural blueprints, and more. And since it is completely integrated into 4th Dimension, 4D Draw diagrams can be created from, dependent on, and integrated with database information. You can even create hybrid solutions that allow drawings to act as user interfaces.

4D Draw features include:

- ▶ File formats: 4D Draw, read/write PICT, read EPSF
- ▶ Drawing size up to 120" × 120"
- ▶ Reduction/enlargement up to 800%
- ▶ Custom rulers (units, divisions, scale, and notation)
- ▶ Templates
- Print merge
- Hide/show rulers, ruler lines, page breaks, coordinates panel, menu bar, tool palette, and scroll bars
- Object types: text, lines, ovals, rectangles, polygons, arcs, bitmaps, hot-links, pictures, and groups
- ▶ 256 colors and 36 patterns
- Object rotation in 1° increments
- ► Search for objects by attribute (color, fill, type, name, etc.)
- ▶ Custom corner rounding and line widths
- ▶ Place, size, and scale objects by mouse or keyboard
- ▶ Flip, align, group, and smooth objects
- Lock objects on individual attributes (size, color, location, etc.)
- ▶ Object attribute dialog for each object
- ▶ Multiple fonts, size, styles, and colors per text block
- ▶ Interface entirely modifiable by programming
- ► Live references to 4D variables, fields, commands, methods, and other plug-ins
- ▶ Hotlinks to and from other 4D Plug-ins
- Over 140 4D Draw commands

4D Write is a simple tool for creating and modifying all sorts of textual documents, from simple letters to multi-part contracts. 4D Write provides file translation capabilities and the most complete mailmerge system available on a personal computer. 4D Write is ideal for database related documents.

4D Write features include:

- Translators for most common file formats
- ▶ Page view mode
- Print preview
- Document statistics
- Templates
- Style sheets
- ▶ Search and replace based on content and/or style
- Headers and footers
- Page numbering
- Date and time stamping
- Left, right, center, and decimal tabs with character fills
- Variable line spacing
- ▶ Left, right, center, and full justification
- ▶ Complete control over font, size, style, and color
- ▶ Graphic scaling
- Visual indicators for margins and tabs
- Paragraph-based rulers with copy and paste
- Soft hyphens
- ▶ Show/hide invisible characters and pictures
- Live references to 4D variables, fields, commands, methods, and other plug-ins
- ▶ Hotlinks to and from other 4D Plug-ins
- 4D Write debug system
- ▶ Nearly 100 4D Write commands

## 4D Calc

4D Calc is a spreadsheet designed for the analysis, simulation, and forecasting of numerical data. It provides all basic capabilities you expect from a spreadsheet, and adds new capabilities through its close integration with 4th Dimension.

Cell formulas in 4D Calc can include references to database components while entire spreadsheets can be created directly from information in a database. Combined with 4th Dimension, 4D Calc provides a unique and powerful set of capabilities.

4D Calc features include:

- ▶ Variable spreadsheet size up to 256 columns and 8,192 rows
- ▶ Templates
- ▶ More than 40 built-in functions
- ▶ Manual or automatic calculations
- ▶ Row and column sorting
- Discontiguous range selection
- ▶ Variable row height and column width
- ▶ File formats: 4D Calc, SYLK, and TEXT
- ▶ Font, size, style, and color for each cell
- ▶ Show/hide grid by range
- ▶ Show/hide row and column titles
- ▶ Show/hide menus and scroll bars
- ▶ Customizable row and column titles
- ▶ Cell rotation in 90° increments
- ▶ Search by values, formulas, and attributes
- ▶ Named cells
- Headers and footers with date, time, and page numbers
- ▶ Print preview
- ▶ Print formula
- ▶ Fill right and down
- ▶ Left, right, centered, top, and bottom cell alignment

- Frames and borders with custom colors and line thicknesses
- Pasted graphics can be scaled and made transparent
- ▶ Multiple lines in one cell
- Different colors for positive, negative, and zero numbers
- Cell formulas with live references to 4D variables, fields, commands, methods and other plug-ins
- ▶ Hotlinks to and from other 4D Plug-ins
- ▶ Over 100 4D Calc commands

