The Bottom Line Up Front

Foresight Technology recently released Area List Pro version 6 and, in my not so humble opinion, this is an upgrade that a lot of developers will want to buy. There are a lot of features in this release. Some are *good* to have while some are *great* to have. All told, the new features make this an upgrade that is easy to justify.

Foresight Technology has proven that they are not willing to rest on their reputation — AreaList Pro version 6 is proof that an excellent product can be made even better.
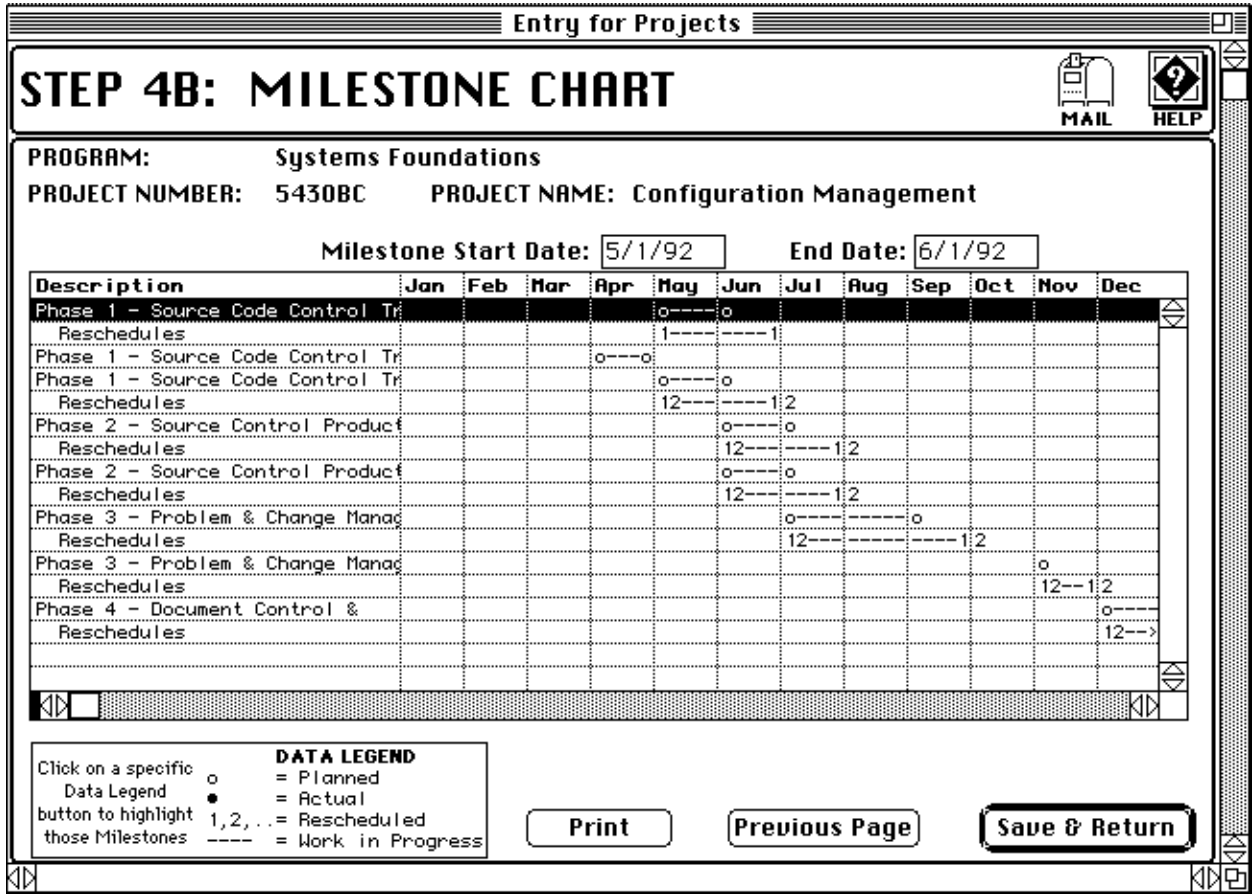
Challenges Met and Conquered Using AreaList Pro

Area List and AreaList Pro are cornerstones of the 4th Dimension development environment. Soon after 4th Dimension programmers increase their proficiency past the "entry level", they are often faced with data presentation challenges that are impossible meet using only the native capabilities of 4th Dimension. Over the years, thousands of 4th Dimension developers have conquered those challenges using AreaList Pro.

This release of AreaList Pro is version 6 and that version number accurately portrays it as one of the most mature products in the marketplace. Since the first release in 1990, each version of AreaList and AreaList Pro have provided 4th Dimension developers with an ever increasing list of features. Thanks to AreaList Pro, we have been able to add tremendous usability to our 4th Dimension-based applications.

AreaList Pro has allowed me to do some amazingly cool things with the 4th Dimension interface. I've decided to share a few sample interfaces from my experience with AreaList Pro. I think that these examples show that AreaList Pro is an extremely versatile product.

Dating way back to 1992, I was able to develop a most unique interface using AreaList version 2. This interface shows AreaList supporting Gannt charts in a project management database.

A few years later, a I needed to create a timecard interface to allow Users to track billable and non-billable hours for all projects, for each day of the week. Once again, AreaList Pro was used to create an interface that made it a breeze for the end user.

The illustration shown below is a late prototype of the production system. Each cell in the timecard is enterable (numbers only, of course!) and the User can tab from one cell to the next. By using the "callback" feature in AreaList Pro, subtotals and totals are updated when the User tabs out of a cell.

Weekly Timesheet — 7/31/95 to 8/6/95

Unbillable Projects:

Project Name	Proj. №.	Mon. 7/31	Tues. 8/1	Wed. 8/2	Thur. 8/3	Fri. 8/4	Sat. 8/5	Sun. 8/6	Total Total
Internet	95001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vacation	95065	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Regular Holiday	95070	2.00	2.00	0.00	0.00	0.00	0.00	0.00	4.00
Sick	95071	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Misc/Jury Duty	95072	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Hours		2.00	2.00	.00	.00	.00	.00	.00	4.00

Billable Projects:

Project Name	Proj. №.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Sun.	Total
Toll Phase III	95031	2.25	2.25	2.25	0.00	0.00	0.00	0.00	6.75
Desired Cust Attribute	95050	4.00	4.00	4.00	0.00	0.00	0.00	0.00	12.00
Chili	95008	0.00	0.00	0.00	8.00	8.00	0.00	0.00	16.00
Total Hours		6.25	6.25	6.25	8.00	8.00	.00	.00	34.75

Total Hours: 8.25 8.25 6.25 8.00 8.00 0.00 0.00 38.75

☐ Commit   [Cancel]   [**OK**]

In the project management database shown above, the client wanted to be able to assign staff members to tasks. Since the client was an avid Macintosh user, he was very pleased with the drag and drop capabilities that AreaList Pro supported.

The User can create assignments by dragging a Staff Member name on to a Task or vice versa. To delete an assignment, the User simply drags the assignment to the trashcan (which is an AreaList Pro "Drop Area") in the lower right corner of the layout. AreaList Pro popups are used for the Start and End dates, as well as for the Level of Effort ("LOE") values.

A recent custom project that takes advantage of a multitude of AreaList Pro features is this data entry screen for a fantasy sports league database. With complete control over enterability, formatting, and cell updating, AreaList Pro made it possible to develop this data entry screen. When a customer calls in his roster changes, AreaList Pro lets the customer service representative execute them in real time.

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                         Invoice No — 42652

Team Num.:  FB01035   (Cust. Info.)   League №.:   FBP103   ○ Credit Card  ○ From Balance
Team Name:  Dukes of Hazard          League Rank:    26        0.00      24.00     -24.00
Cust. Name: Daisy Duke               Contest Rank:   57     On Dep.   This Inv.  Amt. Left
```

*	Drop/Taxi/ Designate	Player (Code)	Acquire/Start/ Undesignate	Player (Code)
1	Taxi	Elliot, Lin	Start	Jaeger, Jeff
2	Drop	Brown, Dave	Acquire	Elam, Jason
3	Taxi	Testeverde, Vinny	Start	Loville, Derek
4	Drop	Watters, Ricky	Acquire	Testeverde, Vinny
5				

(Add)   [Player List]

№.	D.S.	Name	Salary	Team
K301		Elam, Jason	2.90	DEN
K307		Pelfrey, Doug	2.30	CINN
K324		Lowery, Nick	1.50	NYJ
K325		Jaeger, Jeff	1.40	OAK
Q112	✓	Testaverde, Vinny	6.00	BAL
Q119		Esiason, Boomer	5.30	AZ
Q120		Mirer, Rick	5.10	SEA
Q122		Bono, Steve	4.70	KC
Q125		Brunell, Mark	3.30	JAC
R201	✓	Sanders, Barry	4.50	DET
R221		Loville, Derek	2.20	SF
R225		Thomas, Rodney	1.90	HOU

Total Salaries: 55.90

№.	2 Acquired
K301	Elam, Jason
Q112	Testaverde, Vir

№.	2 Dropped
Q115	Brown, Dave
R204	Watters, Ricki

№.	10 Reserves
K309	Hanson, Jason
K328	Elliot, Lin
Q108	Kelly, Jim
Q112	Testeverde, Vinny
Q118	O'Donell, Neil
R210	Rhett, Errict
R216	Davis, Terrell

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These examples show how various versions of AreaList and AreaList Pro have allowed me to solve difficult user interface issues. It's safe to say that none of these projects would have been possible without AreaList Pro. But that's enough of previous versions of AreaList Pro. Let's look at the features of version 6.

The Latest and Greatest

Version 6 of AreaList Pro has some revolutionary features as well as some evolutionary features. The big guns in this release are the ability to display fields in an AreaList Pro area, a feature that lets the developer display an

AreaList Pro area in a resizable window, and support for multiple row dragging.

There are a lot of evolutionary features, too. My top picks include cell dragging, the increased number of columns that can be displayed, disabling highlighting of selected rows, and setting callbacks that run when the User leaves or enters the AreaList Pro area.

The ability to *Display Fields* is number one on my list! For me, this one feature makes the upgrade worth the price. Why? Well, for years developers have used AreaList Pro in the place of 4D's included areas. By replacing included areas with AreaList Pro, developers have been able to add a boatload of usability features. But there was a price attached because quite a bit of work was needed to write and maintain quite a bit of code.

AreaList Pro version 6 to the rescue! Now that AreaList Pro allows you to display records directly, you can still have the interface benefits of AreaList Pro but, since we're dealing with records instead of arrays, we can discard all of the array management code. Life is much better!

Area List in a Resizeable Window allows a User to resize a window by using the grow box and AreaList Pro columns and rows will fill the resized window. This feature in AreaList Pro 6 gives us a bit of the taste of 4th Dimension Version 6 and brings 4th Dimension applications more in line with most other Macintosh programs.

After creating the layout, the developer must place the AreaList Pro area in the lower right side of the layout. All other items on the layout must be positioned above or to the left of the AreaList Pro area. The AreaList Pro area should be sized so to accommodate the largest monitor in the user audience.

Foresight has added a new command, "AL_SetWinLimits", to allow the developer to control the minimum and maximum size of the 4th Dimension window that contains the AreaList Pro external area.

Multiple Row Dragging allows the User to select multiple rows and drag those rows to an AreaList Pro area. The destination may be in the same process or it may be in another process.

Without this feature, it can be very tedious to have to repeatedly drag and drop, drag and drop, drag and drop. In one of the example interfaces I have

illustrated above, the User can assign Staff Members to a Task. Prior to version 6, if a manager wanted to assign six people to a task, he would have to drag and drop six times. With multiple row drag and drop, only one drag and drop is needed. Very nice.

Cell Drag and Drop is another nice touch that allows us drag data from one cell to another. The demo database included with AreaList Pro allows you to either overwrite the contents of the destination or, by selecting an option from the popup, you can swap the contents of the destination cell into the source cell.

Prior this new functionality, we've had to rely on scrollable lists to present a large selection of items to the user. With the ability to drag and drop cells, we can place those items in an AreaList Pro area and allow the user to scan through the matrix of data instead of having to scroll through a list.

The *Maximum Number of Columns* that can be displayed in single AreaList Pro area has been increased. In the Gannt chart example, which was written in AreaList version 2, I was limited to only 15 arrays. As a result, I could only show 12 months on the Gannt chart. AreaList Pro version 4 supported 100 columns while this new version increases that limit to 255 columns!

Rounding out the new feature list is increasing the maximum number of draggable objects from 50 to 100 objects per layout and allowing the developer to disable highlighting of select rows (very nice for setting markers such as check marks or bullets!).

Last, but not least, is the command "AL_SetMainCalls" which sets the callbacks that run when you enter or leave an AreaList Pro area. It is now easier to control the user interface when using AreaList Pro in place of 4D's included areas. Nice touch.

AreaList Pro version 6 ships on two disks which include the external in MAC4DX format as well as a custom installer for use with earlier versions of 4D. The demo database and the example database have been updated to show off the new features. These two databases remain a valuable source of ideas of how to program and use AreaList Pro.

Documentation has been updated as well. Instead of weighing developers down with a paper-based manual, the AreaList Pro manual consists of a 1.4

megabyte Adobe Acrobat file. The manual is comprehensive and well indexed. With 230 pages to choose from, there's always something new to learn about this product! Fortunately, the entire command set is referenced by both the function type as well as by alphabetical listing.

The Verdict

AreaList Pro is the best product to convert "yet another 4D database" into a "killer business application." Version 6 a valuable upgrade to an invaluable product. Go for it.

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