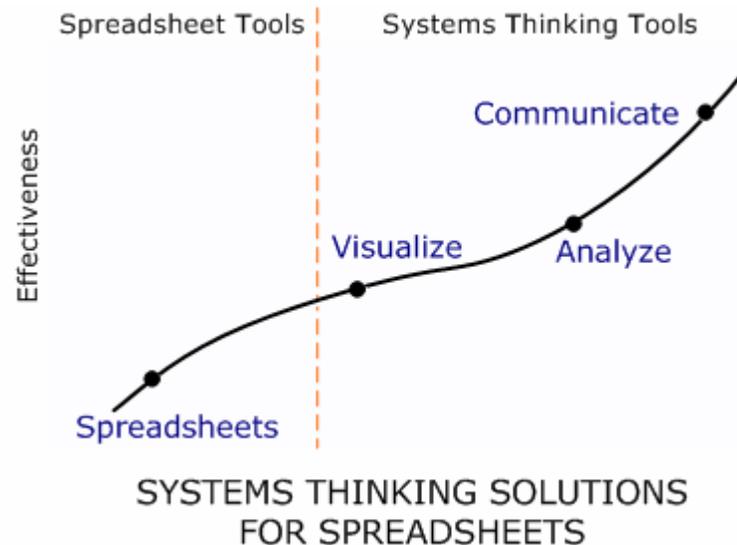*only*

The Tool that brings Visualization and Systems Thinking capabilities to the Microsoft Excel Spreadsheet

Exposé 2.0

Add-in to Microsoft Excel

Spreadsheet Tools | Systems Thinking Tools

Effectiveness

Communicate

Visualize | Analyze

Spreadsheets

SYSTEMS THINKING SOLUTIONS FOR SPREADSHEETS

AG Attune Group, Inc.

www.attunegroup.com

Spring 2005

$\Longrightarrow$ Visualize $\Longrightarrow$ Analyze $\Longrightarrow$ Communicate $\Longrightarrow$

Exposé 2.0:

➢ Reveals interconnections among the cells and variables in the form of tree diagrams and circular causal diagrams

➢ Identifies and reconstructs the stock and flow structure that exist in a spreadsheet model

➢ Identifies and displays circular causalities in the form of reinforcing and balancing feedback processes

➢ Shows formulas with fully spelled names and indices

➢ Create new formulas or edit existing formulas in the visual environment

➢ Build dynamic models in the visual environment with stock-and-flow and feedback loops and translate them into spreadsheets instantaneously

➢ Use sliders on all parameters to perform sensitivity and automatic sensitivity tests and create comparative charts

Click here to start Exposé

Click here for Table Functions

Total Population has an indirect impact on Adoption from Word of Mouth

Potential Adopter has a direct impact on Adoption from Word of Mouth

Click here for sliders

Tooltip for Adoption from Word of Mouth: Full name and location in spreadsheet

Move the sliders to change the constants

Click here to see the scatter plot for Adopters and Adoption Rate

A Reinforcing Process involved in Adopters

Automatic Sensitivity Test for Adoption Rate

Chart for Adopters and Adoption Rate

Microsoft Excel - Book1

File   Edit   View   Insert   Format   Tools   Data   Windo

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Sheet1

Ready

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Exposé - Book1

File   View   Settings   Tools   Help

View1   View2   View3

fx:

Exposé Toolbar

Exposé Update
Insert View
Retrieve
Save
Print
Zoom in
Zoom out
Undo
Show All
Clear
Setting Tables
Setting Time
Show Name
Show Index
Show Polarity
Show/Edit Equations
Show Graph
Show Time
Show Stocks
Show Flows
Show Loops
Show Comments
Show Sliders

Lock/Unlock
Insert Converter
Insert Stock
Insert Flow
Insert Connector
Delete

Exposé Toolbar

Icons-Set 1

Exposé Update	Updates Exposé for the active cell in spreadsheet
New View	Insert New View
Retrieve	Retrieves maps that have been saved previously
Save	Saves maps and diagrams
Print	Prints maps and diagrams
Zoom in	Enlarges diagrams
Zoom out	Reduces diagrams
Undo	Discards last action in Exposé
Show All	Displays all precedents of the active cell
Clear	Removes existing maps of precedents and causal drivers of the active cell

Icons-Set 2

Setting Tables	Allows user to define labels for rows and columns (names and indices)
Setting Time	Allows user to set up time for a dynamic model
Show Name	Displays name of variable that the active cell or its precedents represent
Show Index	Displays index of variable that the active cell or its precedents represent
Show Polarity	Displays polarity of the link between two cells or two variables

Icons-Set 3

Show/Edit Equations	Allows editing formulas and displays them with fully spelled-out names
Show Graph	Displays graph for a variable over a particular range of its index
Show Time	Displays index in dynamic models in terms of time dimension
Show Stocks	Displays integration points in spreadsheet of a dynamic model
Show Flows	Displays flows and stocks in spreadsheet of a dynamic model
Show Loops	Displays feedback processes in spreadsheet of a dynamic model
Show Comments	Displays the comments above variables in a tree diagram
Show Sliders	Puts sliders on parameters and constants

Icons-Set 4

Lock/Unlock	Activates modeling environment in Exposé and changes tree diagrams into circular causal diagrams
Insert Converter	Creates a new converter in Exposé and spreadsheet
Insert Flow	Creates a new flow in Exposé and spreadsheet
Insert Stock	Creates a new stock in Exposé and spreadsheet
Insert Connector	Connects variables
Delete	Deletes links and variables

A Few Tips for working with Exposé 2.0:

1. If you choose a cell in the spreadsheet that contains a formula and then click on the Exposé icon, you can trace back the precedence of that cell through the Tree Diagram of Precedents. Just double click on the variables that are Bold.

2. If you choose a cell in the spreadsheet that contains a variable name and then click on the Exposé icon, you can trace the causes of the variable through the Tree Diagram of Causal Drivers by double clicking on the variables that are Bold.

3. By Clicking on the Unlock icon, the Tree Diagram of Causal Drivers turns into a Circular Causal Diagram and you can build models in the graphical environment and see them in the spreadsheet.

4. Click on any variable in Exposé and then click on the Graph icon to see the chart for the variable. To select more that one variable in a graph, click on the second variable while holding the Ctrl Key.

5. If you click on the slides icon, all the constants and parameters will have sliders for sensitivity analysis. Push the pin icon in the graph for comparative graphs. Right click on any sliders to set up the slider and performs Auto Sensitivity Analysis.

6. Click on the Equation icon to see or edit the equation(s) for the selected variable.

7. Display feedback processes by clicking the Show Loop icon.

8. Click on Show Stocks or Show Flows to display or hide Stock or Stock-and-Flow structure.

Summary of Exposé Features

Feature	Description	How to Access
Tree Diagrams of Precedents	Maps the interrelationships that exist among CELLS in spreadsheets in the form of tree diagrams	- In spreadsheets, click on a cell that contains a number - Click on Exposé icon in MS Excel toolbar or Exposé toolbar - In Exposé, double click on a variable to expand the tree
Tree Diagrams of Causal Drivers **For Dynamic Models Only**	Maps the interrelationships that exist among VARIABLES in a spreadsheet in the form of tree diagrams	- In spreadsheets, click on a cell that contains a variable name - Click on Exposé icon in MS Excel toolbar or Exposé toolbar - In Exposé, double click on a variable to expand the tree
Stock-and-Flow/ Feedback Structure **For Dynamic Models Only**	Maps the interrelationships in the form of Stock-and-Flow/ Feedback diagrmas	- Click on Lock/Unlock to unlock a tree diagrams of causal drivers
Show Index	Reveals the second label in a spreadsheet. The first label reveals the variable names	Click on the Show Index icon in the Exposé toolbar
Show Polarity	Denotes the direction of changes in the effect variable as the cause variable changes	Click on the Show Polarity icon in the Exposé toolbar
Show /Edit Equations	Allows you to create or modify formulas and displays them with fully spelled-out names and indices	- Click on a variable to highlight - Click on Show Equation in the Exposé toolbar to display an equation - Click on Edit inside the Show Equation window to create or modify an equation

Feature	Description	How to Access
Show Stocks **For Dynamic Models Only**	Indicates integration points in spreadsheet model	Click on the Show Stocks icon in the Exposé toolbar to reveal the stocks
Show Flows **For Dynamic Models Only**	Indicates integration points and corresponding flows in spreadsheet model	Click on the Show Flow icon in the Exposé toolbar to reveal the flows (and stocks)
Show Loops **For Dynamic Models Only**	Displays reinforcing and balancing processes that exist in the model	Click on the Show Loop icon in the Exposé toolbar to display the feedback loops
Show Sliders	Changes the value of parameters and constants in a spreadsheet model	- Click on the Show Sliders icon in the Exposé toolbar - In Exposé, right click on a slider to change the setting and/or reset to the original value(s) - Click on Auto Sensitivity in the slider setting to perform automatic sensitivity analysis
Show Graphs	Depicts variables in the form of charts	- Select a variable in Exposé - Click on the Show Graph icon in the Exposé toolbar - Click on the Pin icon in the graph toolbar to lock-down the current chart - Click on the Graph Type icon in the graph toolbar for different chart types
Show Comments	Shows comments attached to a cell in the tree diagrams	- Click on the Show Comments icon in the Exposé toolbar - Right click on a variable in Exposé environment to create, edit, or delete comments

Feature	Description	How to Access
Unlock/Lock **For Dynamic Models Only**	- Activates modeling environment in Exposé - Changes tree diagrams into circular causal diagrams - Allows relocating of variables in Exposé	- Click on the Unlock/lock icon in the Exposé toolbar - Relocate variable in Exposé for better display
Insert Converter **For Dynamic Models Only**	- Creates a new converter in Exposé and spreadsheet	- Click on the Insert Converter icon and then click on Exposé environment - Name the variable and select its location in the spreadsheet
Insert Stock **For Dynamic Models Only**	- Creates a new stock in Exposé and spreadsheet	- Click on the Insert Stock icon and then click on Exposé environment - Name the variable and select the location of the variable in the spreadsheet
Insert Flow **For Dynamic Models Only**	- Creates a new flow or connects an existing flow to a stock in Exposé and spreadsheet	- Click on the Insert Flow icon and then click on Exposé environment - For outflows, start inside a stock move the cursor while holding the left click, then release the left click outside the stock - For inflows, start outside a stock move the cursor while holding the left click, then release the left click inside a stock - Name the variable and select its location in the spreadsheet
Insert Connector **For Dynamic Models Only**	- Connects the variables	- Click on the Insert Connector, then click on a cause variable and move the cursor while holding the left click, then release it when the cursor is on an effect variable - Name the variable and select its location in the spreadsheet