

Data Visualization and Analysis

SYNGLYPH X



Interactive Virtual Holographic Environment

Technological advancements have led to large and complex data sets that **SynGlyphX** helps make sense of by providing compelling technology solutions that **synthesize** (Syn), **visualize** (Glyph), and solve for the **unknown** (X variable) in an **interactive zSpace virtual holographic environment**.

zSpace Virtual Holographic Environment



Tracking
Cameras

Display

Clip-on Tracked
Eyewear

Integrated
Stand

Tracked
Eyewear

Non-tracked
Eyewear

Stylus

zSpace Environment

- Virtually-holographic images appear “solid” in 3D open space, as if they are real physical objects
- **Stereoscopic 3D** depth perception with full-resolution images rendered for each eye (**image parallax**)
- Full **motion parallax**, with 4 tracking cameras for viewing angle of user, enabling user to **look-around** objects
- Lightweight passive circularly-polarized stereoscopic 3D eyewear with trackable markers
- MEMS gyroscopic stylus for **precise direct interactions** with objects along Z-axis

zSpace® is a registered trademark



zSpace Display

- 24 inch HD LCD with 120Hz refresh rate and pulsed-segmented LED backlight
- 1920 x 1080p HD LCD resolution with 16:9 aspect ratio
- Time-sequential stereoscopic display natively supports OpenGL quad-buffered stereo mode
- DisplayPort and DVI-D (Dual Link) connections
- Accepts 3D volume data sets

zSpace[®] is a registered trademark



Features of SynGlyphX Technology

- Interactive and intuitive environment
- Glyph is a collection of objects that visually represent user data
- Data fields are mapped directly to the glyph using spatial cues like size, color, shape, position and transparency to assist the user in identifying patterns of particular importance
- Integration of multiple heterogeneous data streams into a single zSpace-compatible environment
- Easily plot both spatial and temporal data in the same zSpace-compatible environment

Benefits of SynGlyphX Technology

- **Speed**
 - Enables quick understanding of large and complex data
- **Efficiency**
 - Reduces amount of time reading and processing information that can more easily be visually represented and comprehended for scenario analysis
 - Eliminates time-consuming creation and analysis of graphs and spreadsheets
- **Effectiveness**
 - Visualizing data creates an objective view of the data that enables more impartial decision making
 - zSpace brings greater clarity to the objects on the glyph so that it becomes easier to see more of the sub-data across multiple glyphs at one time, than possible with conventional 2D monitors

- Licensed Software
 - License Glyph KIT™ Builder so user can construct their own data visualizations
 - License existing Glyph KIT™s so user can visualize their own data
- Custom Build
 - Our professionals can design and build new visualizations to address specific user needs
- Data Scientist / Data Visualization as a Service
 - Our professionals can work on a part-time or full-time basis in the user environment to create new visualizations for discovery and communications

“HUMANS PROCESS VISUALS 60,000 TIMES FASTER THAN TEXT”
3M Research

SYNGLYPHX
TRANSFORM DATA TO KNOWLEDGE. FASTER.

THE HUMAN BRAIN RECOGNIZES SHAPES, PATTERNS, COLORS, AND OTHER ATTRIBUTES TO QUICKLY ASCERTAIN CONTEXT AND MEANING.

GLYPH IT VISUALLY REPRESENT YOUR DATA TO MAKE IT EASIER TO PROCESS AND QUICKLY DISCOVER INSIGHT

A SYNGLYPHX GLYPH IS A COLLECTION OF OBJECTS THAT VISUALLY REPRESENT YOUR DATA

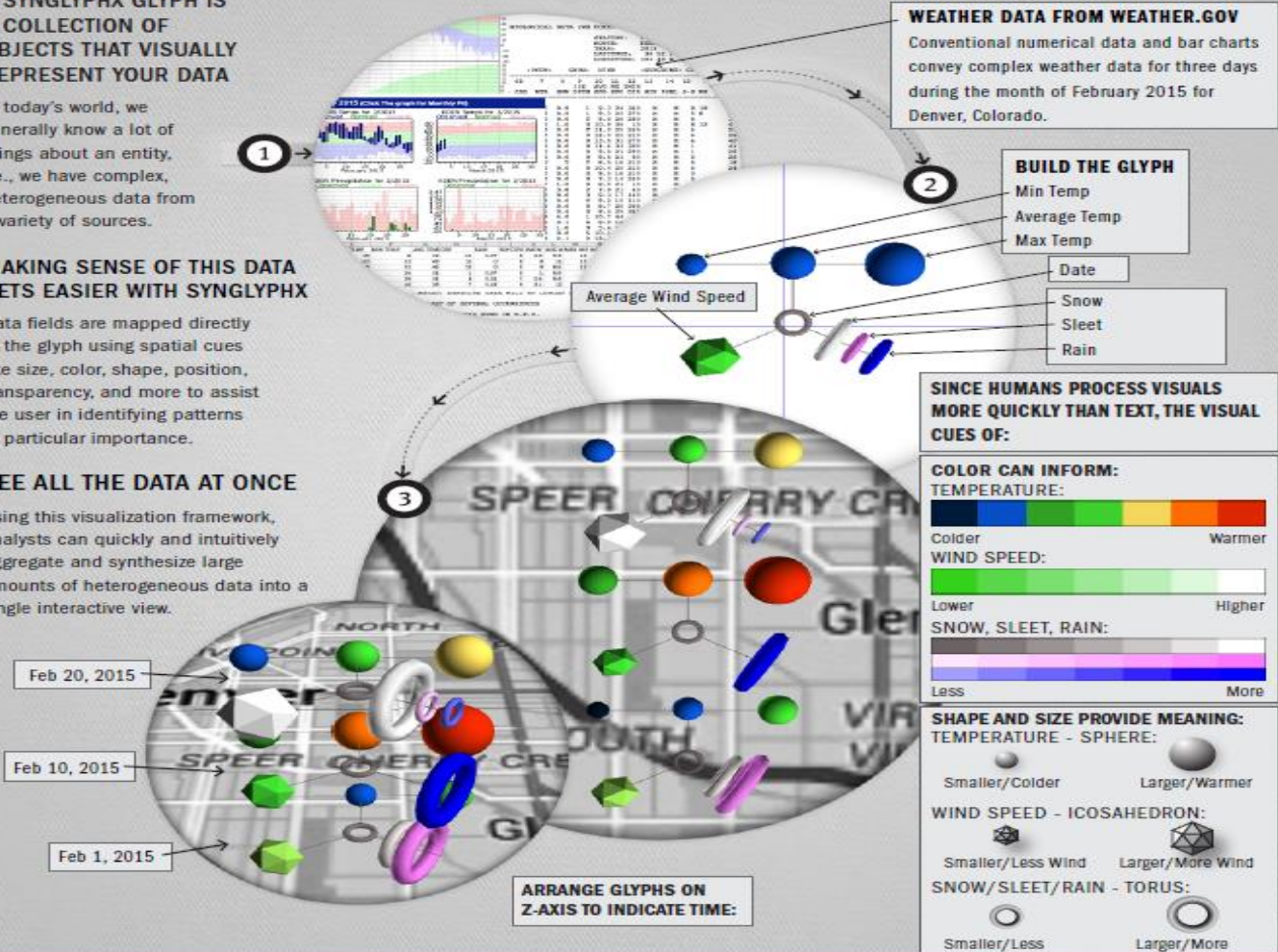
In today's world, we generally know a lot of things about an entity, i.e., we have complex, heterogeneous data from a variety of sources.

MAKING SENSE OF THIS DATA GETS EASIER WITH SYNGLYPHX

Data fields are mapped directly to the glyph using spatial cues like size, color, shape, position, transparency, and more to assist the user in identifying patterns of particular importance.

SEE ALL THE DATA AT ONCE

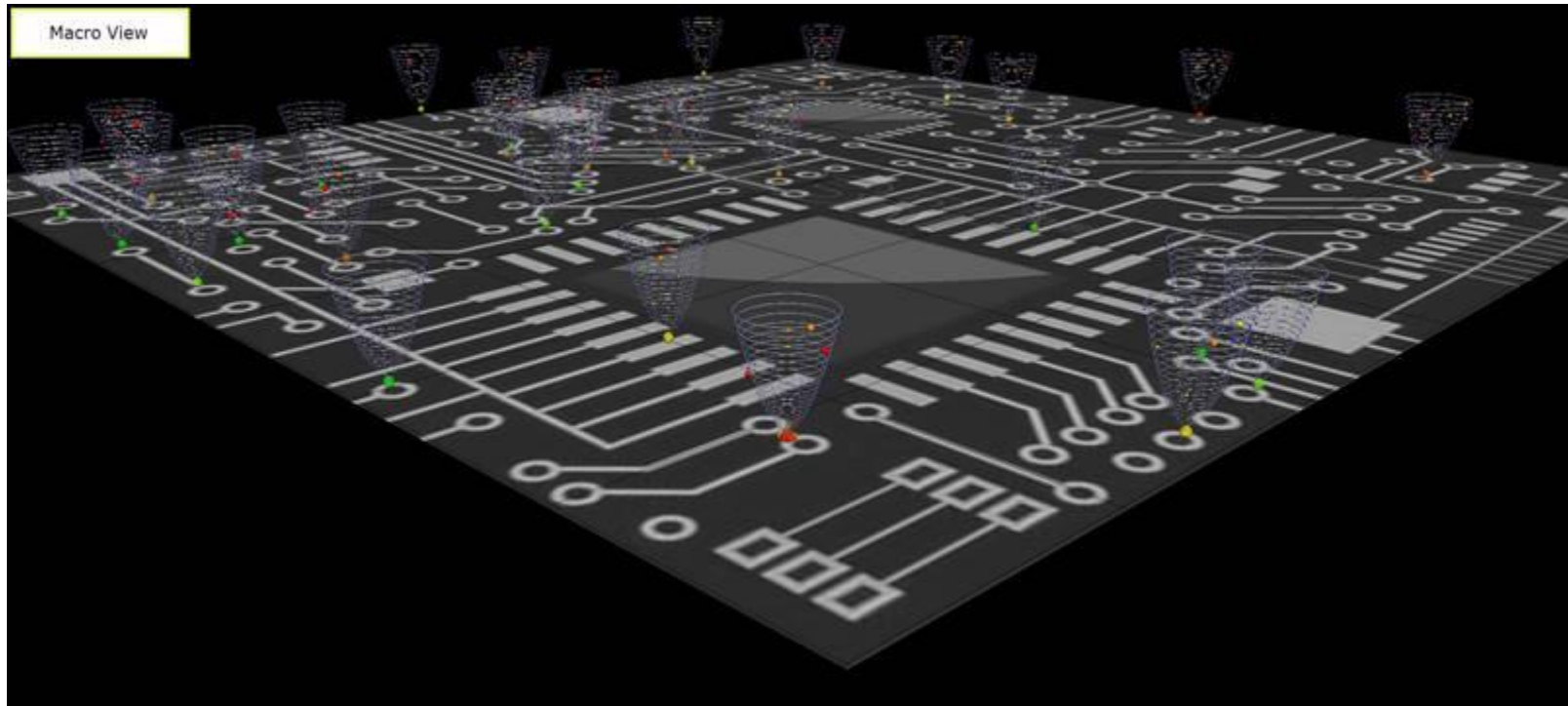
Using this visualization framework, analysts can quickly and intuitively aggregate and synthesize large amounts of heterogeneous data into a single interactive view.



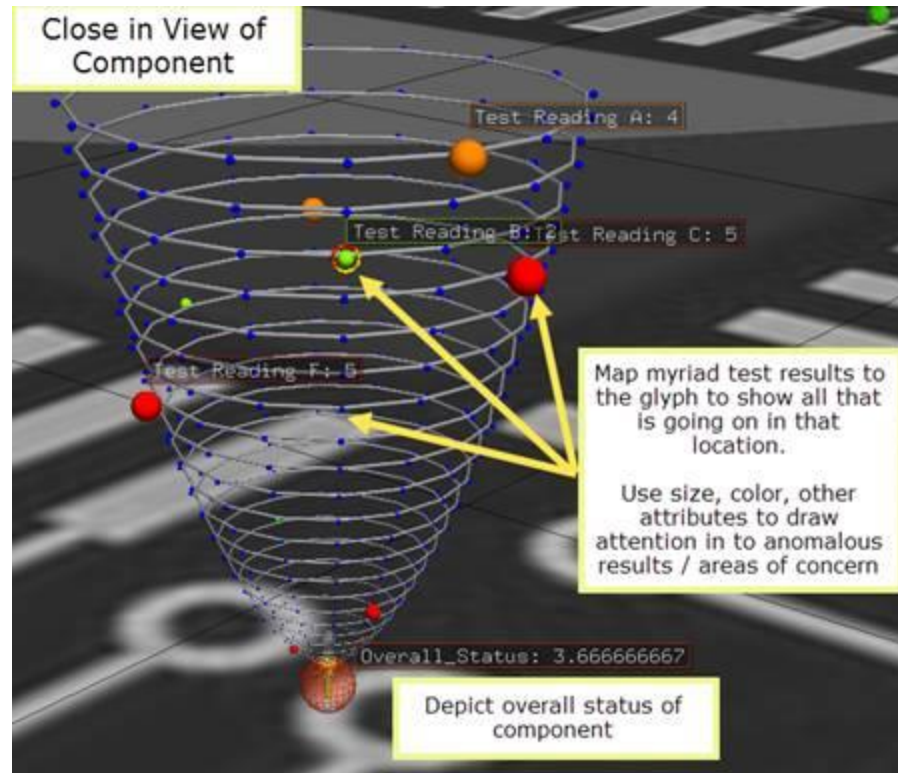
Glyphs on zSpace



PCB Macro View Demo Video



PCB Close-In View Demo Video



- High-Definition Metrology
- Recipes For In-Line Inspection
- Recipes For In-Line CD Control
- Failure and Root Cause Analysis
- Defect Detection and Reduction
- PCB and Wafer Yield Improvement

If you cannot find it, you cannot fix it*

If you cannot measure it, you cannot improve it**

* Ivo Bolsens, Ph.D., Xilinx CTO

**Sir William Thomson Kelvin

- Refers to **measurement of dimensional** or other **attributes of an object** where measurements are made densely across observable extent of that object.
- **Measured attribute of object can be displayed** with high-definition (*High-Definition Metrology* is analogous to *High-Definition Television*).
- Used where it is desired to know more precisely at what **location certain attributes occur** or where **values are outside of some specified range** of values.
- In precision manufacturing this knowledge may enable remedial action to be taken to **correct or control process variables that affect dimensions** of a manufactured part.

* Wikipedia

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Contact Information

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