Geometric Gauge, the first Information Age display system.

As we progressed from the Stone Age, we as humans invented and developed various items and systems to best cope with the inevitable changes happening around us. All these systems and devices were developed within the era where it was needed.

The first instrument was developed in 1441 (Middle Age) in the Chosen Dynasty, the water sight gauge. Until the Steam gauge was invented at the start of the Industrial Age, no new developments really took place as far as displays are concerned. The Steam gauge was the first display of the new era. Numerous other displays were invented and perfected in the following centuries.

All the new developments were evolutionary and not revolutionary. When the digital Age started, all the Industrial age Instruments and Displays underwent an evolutionary change. The water sight glass became the Bar-graph display and the familiar Steam gauge stayed the same. In essence, nothing has changed in the last 560 years.

The problem today is that we are in the Information Age, an age of information overload, lightning fast speeds and sensor rich digital data. We live in a consciousness of safety, competitiveness, better understanding of self and a willingness to accept the new. Although we are living in the Information Age, we still use Industrial Age technology with its associated drawbacks. No display system currently exists to address the requirements of the Information Age.

Take our Steam gauge as an example. You need to focus on the gauge to enable you to read the information displayed on it. Each gauge can only display one sensors information. If there are a number of sensor's to be monitored, you need multiple instruments. To visually interpret each instrument can take between 200 milliseconds and 1000 milliseconds, a rather long time in which you cannot do anything else. The current gauges cannot show trends and there is no way to show more than one parameter on a single instrument.

Can we solve these drawbacks? It is indeed possible to solve all of the drawbacks of the Steam era gauges. For that, Geometrica was invented. It was invented for the Information Age, specifically to resolve the requirements of the new Era. It is a Geometrical shape based display. It allows the display and monitoring of multiple sensors on a single gauge. There is no restriction at all on the number of parameters that can be monitored. You do not have to look at the instrument to read it as is required with Steam era gauges, in other words, you do not need to look directly at the display to understand its information. You only need to view Geometrica with peripheral vision.

Another advantage of using shapes is that the recognition of the data happens very fast. Geometric shapes also ensure that no mistakes are made, nor interpretation errors. The Geometrica technology allows you to display trends for each parameter. If the value has changed over a period of time, you instantly see how fast the change was as well as its direction.

Geometrica is the first instrument that automatically converts sensor data into status information. This in turn allows a multi tiered hierarchical display. In very complex systems, it is now possible to show the overall status of the system. The conversion from data to status allows the system to percolate its status to the top layer, following the system rules. These rules are the same rules as specified by the design engineers for the system.

Multiple redundant coding of information onto the display is possible, thereby addressing issues like colour vision deficiency, cognition speed and efficiency as well as the elimination of interpretation errors. As data is represented on higher levels as status information if so required, based on system design parameters, cognition processing is vastly reduced mitigating the Information Overload phenomena.

Due to the nature of Geometrica, it is immanently applicable to automobile displays replacing speedometers and rev counters. It can be used to monitor engine and other onboard systems without requiring constant visual scanning. It may also be used in nuclear plant and factory monitoring, to replace traffic light signals by using colored geometrical shapes in a single head thereby reducing the number of units at an intersection from twenty four units to eight.

In aircraft Heads up Displays, Geometrica will reduce the clutter substantially as well as increasing the number of items to be monitored tremendously. It has the advantage of reducing the number of display terminals, thereby reducing systems complexity and weight, all huge advantages in aircraft.

A sample of Geometrica images.