HIGH PERFORMANCE HMI/SCADA: BUSTING MYTHS

The human brain is remarkable. When we process visual information, our mind arranges what we are seeing for understanding, rather than offer a simple reflection of what is shown. However, our ability to do this breaks down when presented with imagery that is overly complex, uses too many different colors and provides no focal point or logical flow.

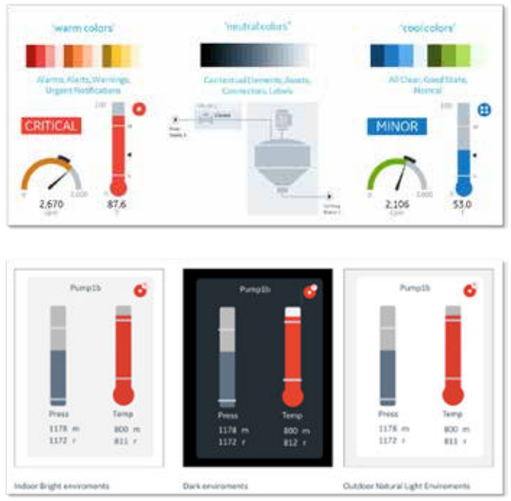
Visually, it's like the odds and ends drawer in your kitchen where you can never find anything quickly. It's distracting, and abnormal conditions don't stand out. Visual presentations like this require advanced training, and slow down an operator's ability to respond to emerging problems.

We can do so much better. With a glance, operators should be able to recognize which information needs their immediate attention. High Performance HMI is the key to optimizing visual information delivery, but it is often misunderstood. Let's breakdown fact from fiction.

Myth #1

High Performance HMI is just a bunch of boring, grayscale, feature-less screens, and it can't make me a better Operator.

Truth: The High Performance HMI standard covers a wide range of topics that simplify the interface, speed operator response time, improve problem and alarm resolution, while reducing errors and mistakes. Yes, color and grayscale are part of the standard, but it's not exclusively about color. It includes things like contextual layout, navigation, shapes, typography, and more...

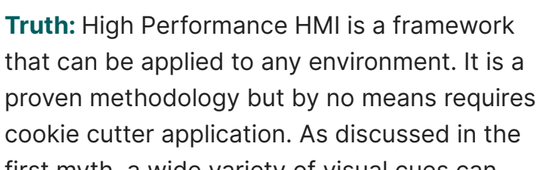


Myth #2:

I need a complete, real-world representation of the process.

Truth: As the map on the left illustrates the real world can be awfully difficult to navigate.

A more structured view we see on the right allows us to more readily visualize our journey.



When you conduct a web search for optical illusions you will find dozens of examples. They are fun to watch, but more critically, they show us clearly how our brain re-orients visual signals in an attempt to make sense of what we are seeing.

The same principle applies for operators trying to pull out signals from very complex system representations. We need to reflect information in a manner that is easy to scan for anomaly and identify areas that require action.

Myth #3:

My screens are unique to me and my process. High Performance HMI is cookie cutter and one-size-fits-all.

Truth: High Performance HMI is a framework that can be applied to any environment. It is a proven methodology but by no means requires cookie cutter application. As discussed in the first myth, a wide variety of visual cues can be utilized to personalize screens for purpose. Through the use of simple, repeatable shapes and a basic color palette that highlights abnormal situations, HMI Operators spend less time searching and navigating, and making decisions faster. Keeping it simple also makes it easy to train the next generation of Operator.

Myth #4:

I've been using the same screens for 10 years, I know where everything is.

Truth: After working so hard to get to know traditional screens, it's tempting to accept the limitations they inherently offer. Change can be hard, but we've seen very experienced operators fall in love with the new approach once a comparison was available. Equally important, the burden on training for less experienced operators drops once more intuitive screens are made available. Similar to decluttering your office, High Performance HMI provides a methodology in decluttering your HMI to make an Operator more efficient, more confident, and less prone to error.

In summary, high performance HMI is a proven way to boost efficiency and increase confidence across operator teams. A good interface is easy to learn, leads to faster reaction time, safer operations and higher productivity. You deserve a system that is intuitive - one that at a glance you can see what actions need to be taken and is easy to navigate.