# Major Oil Refiner Improves Operator Effectiveness by Implementing High Performance Graphics (HPG)

By migrating to high performance graphics using MAVERICK's proprietary development methodology, a major oil refiner reduced graphics count by over 50% and significantly improved operator response to abnormal situations.

## Objective

Five operating units in a large Texas refinery underwent a human machine interface (HMI) migration from legacy Honeywell Native Window and global user station (GUS) to Experion HMIWeb. Instead of reusing the old graphics or performing a like-for-like conversion to Experion, MAVERICK redesigned the entire graphics portfolio to take advantage of the new operator station technology and the latest human factors science to improve operator performance.

## Results

Like most legacy control systems, the number of legacy graphics was much greater than the optimal set required. In this case, the total number of graphics was reduced from 859 to 413, saving a significant amount of money compared to a like-for-like migration strategy. In addition, the effectiveness of the new graphics set a benchmark standard for this refinery.

## Solution

This project was executed at the largest facility of a major US refining company as part of a move to a central control room.

The project scope included HMI standards development, graphics development, distributed control system (DCS) configuration, factory acceptance testing (FAT), site acceptance testing (SAT) and commissioning.

MAVERICK's proprietary graphics development methodology engaged the operators extensively throughout the process, resulting in a high level of ownership and satisfaction prior to commissioning.

The MAVERICK team utilized a graphics progress tracking tool to allow close monitoring of cost efficiency and overall percent of completion (POC) at any point in the project.

Having already developed HP-HMI standards for several customers, MAVERICK quickly created a customized engineering standard for this project. In addition, the team often suggests improvements to existing standards for customers.

MAVERICK's proprietary graphics development methodology utilizes a series of workshops with operations and engineering personnel to develop an optimal graphics layout and create highly effective Level 1 through Level 4 graphics.

Level 1 graphics provide an overview of the critical parameters that serve as precursors to abnormal situations in the plant. These graphics are constantly displayed on a large-screen monitor located above the operating consoles. MAVERICK's development process works to effectively identify the precursor data needed to allow this proactive monitoring.

Level 2 graphics are the most critical set of graphics and contain only the information required to operate the unit 90% of the time during normal operation. MAVERICK's development methodology optimizes the content of these graphics to contain only the information necessary to attain that objective.

MAVERICK's facilitation process allows for reduced development time of the Level 3 and 4 graphics along with fewer customer review cycles compared to traditional methods.

**The MAVERICK Difference**

MAVERICK's highly refined high-performance HMI (HP-HMI) development methodology will optimize your HMI system and operator response efficiency. Our experience in this critical area of automation can improve the effectiveness of your operations.

MAVERICK® TECHNOLOGIES

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