

## Aspen Tech User Group Meeting October 2003 – Paris

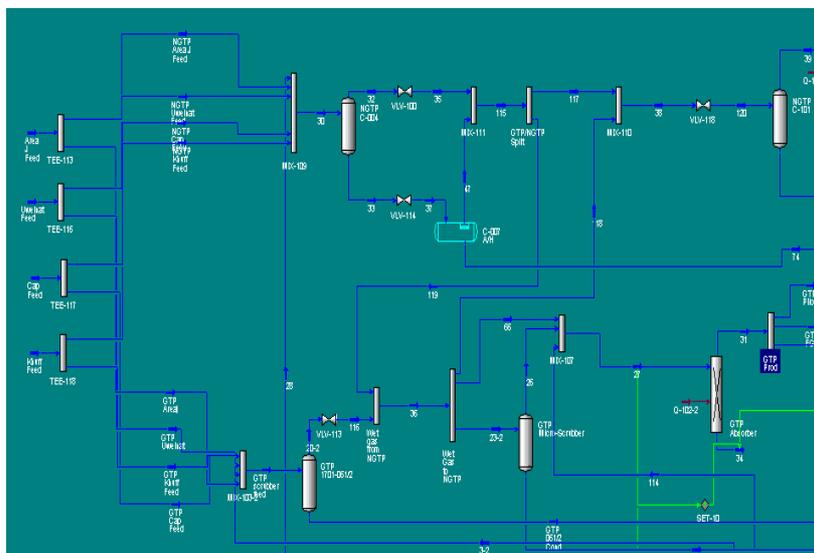


Figure 1 HYSYS model<sup>1</sup>

Aspen Tech's products span manufacturing, supply chain and, within oil and gas, are predominantly focused on refining<sup>2</sup>. Our report is from a relatively new facet of Aspen Tech's activity. Subsequent to the acquisition of HyproTech last year, Aspen Tech has a firm foothold – in fact a near monopoly if the FTC is to be believed – in upstream process control and modeling software. Judging by the relative attendance (about 30 attended the upstream session) this technology is still of limited reach. A new initiative—the [Upstream Advisory Board](#)—sets out the give wider exposure to these techniques. Of note also is Schlumberger's involvement on the Board.

Aspen Tech's offering is at the heart of the 'e-field' concept—where increased data monitoring and information technology are combining to enhance production. Significant technology transfer is underway from refining (where simulation/optimization is used on a regular basis) to the upstream. There is an inevitable culture clash due to differences between process modeling at the refinery and modeling the reservoir. Refiners model processes they understand. Any discrepancy between the model and the facts can be fixed by looking at some of the plethora measurements of the process itself. Reservoir modeling is the poor relation of process modeling. Here parameters are tweaked so that the model fits a limited data set. 'History matching' is widely used to establish the model in what has been a rather unscientific fashion. In reservoir modeling, a rough and ready categorization of fluids as 'black oil' replaces the full compositional measurement of the refinery. Modeling which spans the two domains needs strategies for mapping from one 'world-view' to the other.

Generally, while simulation promises real-time operational production enhancement, operators have proved reluctant to drive assets harder than traditional procedures allow. The modeling community has some way to go to convince engineers that real time optimization<sup>1</sup> can be achieved safely. Today, the role of modeling is mostly limited to plant design. But few doubt that real-time optimization—and the 'e-field' are just around the corner.

<sup>1</sup> Image courtesy AspenTech

<sup>2</sup> In a recent report by [ARC Advisory Group](#) the "Process Simulation and Optimization Worldwide Outlook," worldwide shipments of Process Simulation and Optimization (PSO) software and services, which exceeded \$338 million in 2002, are forecast to reach \$500 million by the end of 2007.

## Highlights

[BP – production optimization](#)

[ADMA – modeling the big picture](#)

[Schlumberger - Reservoir and facility simulation](#)

[Upstream Advisory Board](#)

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## Plenary session

**Lee Riley** welcomed the 400 plus attendees from 48 companies and 29 countries. 60% of attendees came from the engineering community – with the remainder from modeling and simulation.

**David Quillan** provided an update on AspenTech’s financial position which is ‘becoming financially strong’ – with improved financial performance, a new \$100 million line of financing and the company is now net cash positive<sup>3</sup>. Quillan commented that the last twenty years has seen significant investment in ERP systems. But the future will bring a move away from these transaction-oriented systems and will see integration of the two different worlds of finance and engineering via the enterprise portal. Aspen Tech

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<sup>3</sup> Aspen Tech revenues for the first quarter 2004 (ending 30<sup>th</sup> September 2003) were \$77.0 million, with software license revenues totaling \$35.1 million, and services revenue totaling \$41.9 million.