

Optimize^{IT} Expert Optimizer

Reaching New Levels in Minerals Process Optimization

What is Optimize^{IT} Expert Optimizer?

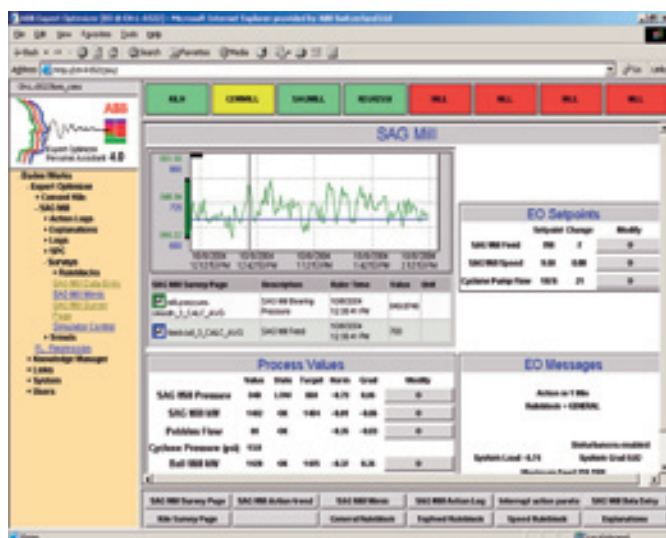
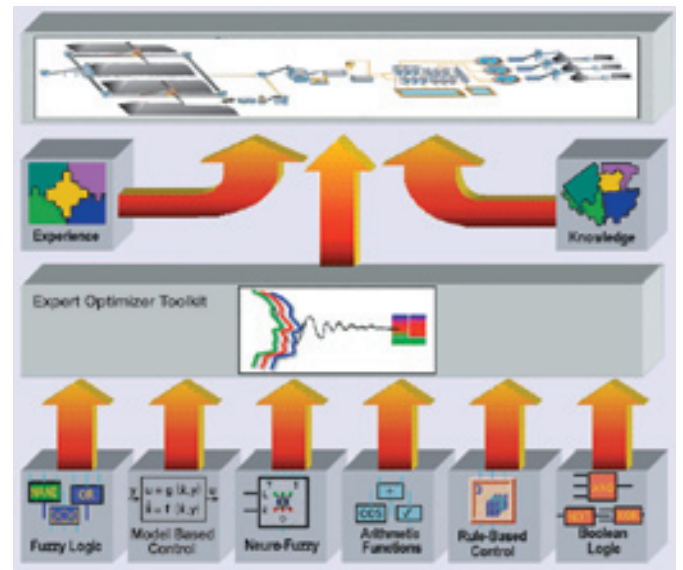
Optimize^{IT} Expert Optimizer is a thin client based graphical engineering and programming environment, which is used to control and optimize your production process via an optimal combination of proven advanced control techniques and extensive process knowledge. Optimize^{IT} Expert Optimizer substantially increases the operational performance by bringing the process closer to its operational limit.

Tangible benefits

- Increased production (3%–5%)
- Energy savings (3%–5%)
- Lower product quality variability
- Reduced grinding media consumption (5%–10%)
- Lower emission levels (3%–5%)

Qualitative benefits

- Operational discipline
- Environmental compliance



How do we do it?

Optimize^{IT} Expert Optimizer does frequent but small adjustments as opposed to large and infrequent ones. It seeks continuous process optimization, reducing variance and improving the overall plant performance.

Applications

- Kiln
- Communion (crushing, grinding)
- Scheduling of batch-continuous processes
- Flotation

Controlling more than 260 processes worldwide, Expert Optimizer systems save our customers more than \$100 million per year



What can you expect from Optimize^{IT} Expert Optimizer

Economic gain

Optimize^{IT} Expert Optimizer leverages the economic performance of your process: you can expect production increases, consistent product quality, lower energy consumption (thermal or electrical) and lower additional costs (refractory, grinding media). By serving as a process knowledge reservoir, Expert Optimizer ensures that the plant operating procedures become traceable and enduring.

Compliance

Optimize^{IT} Expert Optimizer helps enterprises reach environmental, production and quality goals by defining, enforcing and storing the operating procedures defined by management. By coordinating setpoints for different parts of the process, Optimize^{IT} Expert Optimizer becomes a plant-wide decision support tool, helping management to enforce profitability, technological and environmental goals.

Top quality at peak rates

Optimize^{IT} Expert Optimizer applies the best possible control strategy at all times, consistently delivering quality targets at the maximum production rate. You can expect consistent levels of quality with much lower standard deviation.

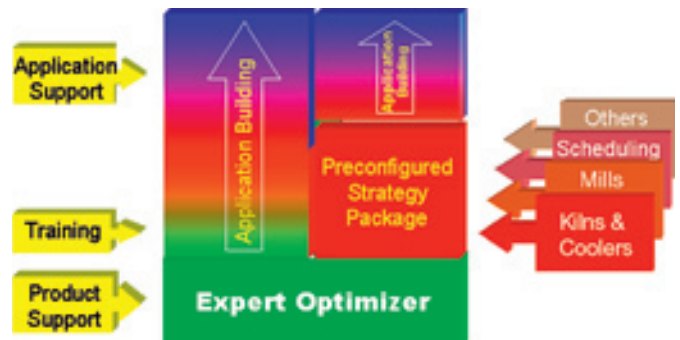
Higher employee productivity

Optimize^{IT} Expert Optimizer removes and avoids tedious but necessary activities for operators and production managers. It gives them back the time for other important tasks like maintenance or quality assessments.

Gear-up with experience and advanced process control

Optimize^{IT} Expert Optimizer mixes advanced process control techniques with extensive process know-how and experience. As you read this material Expert Optimizer is controlling more than 260 processes worldwide. Our production strategies ensure that worldwide proven best practices are applied to your process.

Expert Optimizer Application Structure



How does Optimize^{IT} Expert Optimizer work?

The Toolkit provides a comprehensive variety of advanced control techniques for appropriate strategy development. Importantly, the control strategy is structured into stabilization, optimization and interrupt actions. The graphical engineering environment allows for fast strategy development and low implementation and maintenance costs.

Stabilize then Optimize

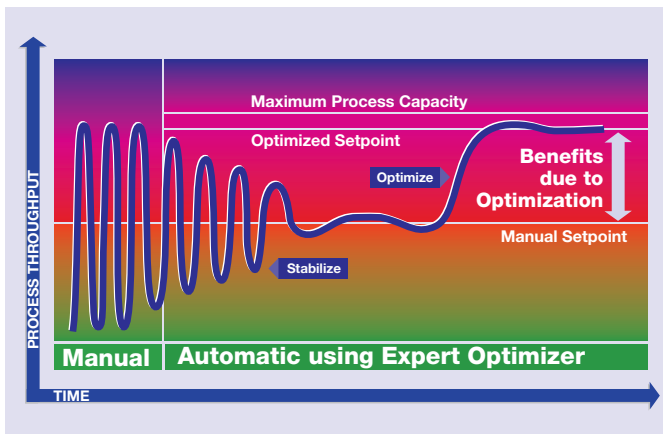


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Basic idea

- First, stabilize the process
- Then, optimize
- Now, supervise
- Repeat

Optimize^{IT} Expert Optimizer Toolkit

Expert Optimizer introduces a new era in systems for the optimization of optimization process industries operations. Rather than «just» optimizing the process, Optimize^{IT} Expert Optimizer delivers a big picture view by providing complete thin client based monitoring, diagnostics and guidance, and empowering not only operators, but also process engineers and plant managers.

In order to reach these goals Optimize^{IT} Expert Optimizer includes:

- Thin client technology
- Fuzzy and Boolean logic
- Neural networks
- Model based control (MPC + MLD)
- Pre-configured control strategies
- Real-time explanations and displays
- Messaging software
- Graphical programming interface
- Drag and drop configuration