

# ABB Review 1/2007

## Human in the loop

### The human factor

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Human in the loop  
How can a system provide better support to the operator, and how will the operator's role change as automation systems grow even more sophisticated?

### Operational profitability

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The calm after the storm  
Major storms can wreak havoc in electrical networks, but inappropriate responses can make things worse
- 16**  
Galvanizing support  
Making a surface perfectly smooth without touching it
- 20**  
Intelligent alarming  
An alarm need not be cause for alarm – but inappropriate alarms can have alarming consequences
- 24**  
Peak performance  
Mastering process variability by understanding plant-wide disturbances

### Capital productivity

- 30**  
Design methods  
Making better use of human strengths is about improving their integration in the loop

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Case study  
A case study using models and methods based on an extended understanding of the *human in the loop*

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Projections of productivity  
Interactive and well-presented displays give operators easy access to the relevant information

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Spatial awareness  
When a 2D schematic is not helpful, ABB can add a dimension

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Mapping the weakest link  
A new look at the visualization of a power network

### Ease of use

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The drive for simplicity  
Lower costs, fewer parts, more functions, more productivity
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Ambient intelligence  
Better connectivity is helping everyday devices become truly wired
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Room for improvement  
Identifying the limiting factor in industrial processes

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## Power semiconductors

Part two: Better performance through better housings, and new materials for semiconductors of the future

## Research activities

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## Plainly speaking

Talking to the computer in natural language

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## Augmented reality

From the living room to industrial control room, there's a pressing need to know which button does what

## Perpetual pioneering

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## Perpetual pioneering

ABB Review is launching a series of historic articles to celebrate the company's pedigree of pioneering

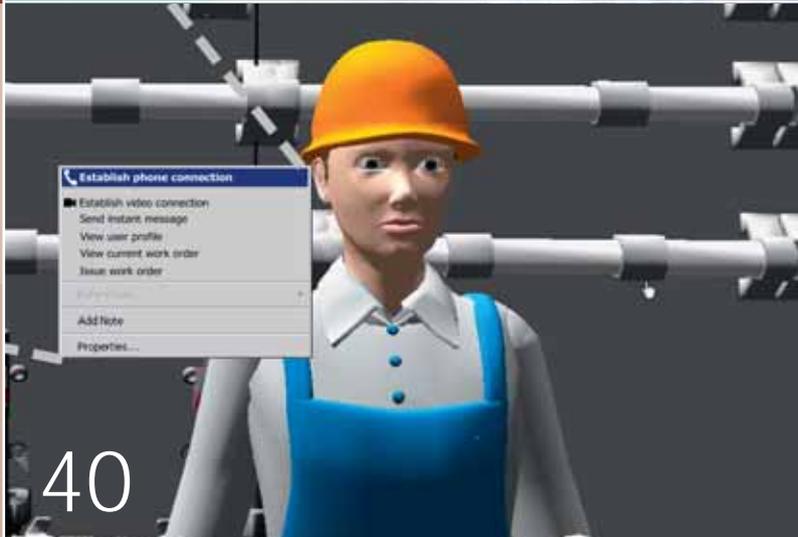
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## The circuit breaker

Looking back over a century of breakthroughs



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