

Project Note

# Laser cutting with your fingertips

The new user interface on the ByVention laser cutting system is easy to operate for anyone. Zühlke developed software for this interface with an eye to special usability criteria.

**Task**

Bystronic was developing a new generation of laser cutting systems called ByVention and hoped to appeal to additional customer segments with this line's new machining design. The laser cutting system was to be used for cutting standard sizes of sheet metal. A crucial part of the design was an intuitive user-centred interface. Bystronic also wished to enlarge its in-house development capacity and commissioned Zühlke to handle usability, requirements engineering and software development for the user interface.

**Implementation**

- In an architectural review, Zühlke pointed out aspects of the present software which the customer could optimise in terms of architecture and process development.
- Together with Bystronic's domain experts, Zühlke software developers and usability specialists designed the masks and operating sequences in usability workshops.
- Zühlke summarized the requirements to be met by the user interface in a document and cleared it with Bystronic.
- Based on the specified requirements, a team of engineers from Bystronic and Zühlke then developed the software on schedule and within the budget.
- In parallel with this project, the customer phased in a software development process called RUP (Rational Unified Process). As a result, Bystronic was able to benefit from the Zühlke experts' RUP experience even while the project work was going on.



**Technical Data**

KEBA Ketop Windows CE user terminal  
 Target platform: Windows CE 5.0  
 Development platform: Windows XP  
 Languages: C#, .NET CF 2.0  
 Environment: Microsoft Visual Studio, Visual Source Safe, NUnit, nAnt, nDoc, CruiseControl  
 Standard components: UI Application Block

**Customer benefits**

- **Transfer of expertise:** Zühlke passed its expertise in embedded systems and Windows CE on to the customer, allowing the customer's team to further develop and maintain the system on their own.
- **Time-to-market:** Zühlke specialists bridged peaks in capacity utilisation to ensure that the product was launched on schedule.
- **Build-up of RUP knowledge:** The system was implemented in the project efficiently with the Rational Unified Process, assuring an optimum cost-benefit ratio.

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