



By Ed RUTKOWSKI, Editor



Best of Show

On the following pages, *Intercom* salutes the Best of Show winners of STC's 2006–2007 international competitions, as well as the top winner in STC's student competition. Congratulations to the winners and to everyone who supported the premier showcase for technical communication!

Brooks-Range All-in-One Map Tool

ITAC CATEGORY: QUICK REFERENCE DESIGN

Matt Brooks had a problem—one that he shared with other backpackers, climbers, and backcountry skiers: to find his way in extreme climates and difficult locales, he needed to carry half a dozen different mapping tools. The scales on topographical maps vary widely, and Brooks needed to read them all. But the available tools, intended for desktop use, were cumbersome sized for the field. He was constantly searching for them in his pack. Made of thick, rigid plastic, the tools grew brittle and cracked in cold weather; like other internationally certified mountain guides, Brooks had a collection of pieces of map tools.

Why did it have to be this way? Why couldn't Brooks use just one tool, something that could withstand the elements, something he could tuck inside his field guide or shirt pocket?

Nine years after he began to answer those questions, Brooks's company, Brooks-Range Mountaineering Co. (www.Brooks-Range.com), produced the All-in-One Map Tool, an amalgamation of scales and measuring aids needed to read all commonly used North American (including Alaskan) and European topographical maps, as well as standard topographical maps in New Zealand and Japan. Printed in black and red on clear plastic, the All-in-One Map Tool has eight different scales, nine different slope indexes, and four different UTM (Universal Transverse Mercator) grid readers. The compass rose in the center contains the common 360-degree notation, as well as the 64-degree maritime notation used on some older maps. The slope indexes allow backcountry skiers to judge the likelihood of an avalanche before attempting

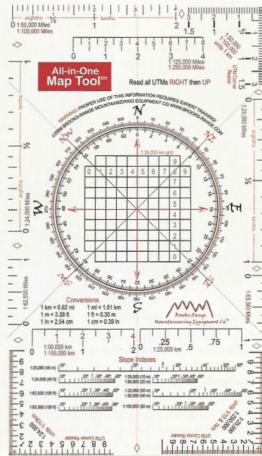
a dangerous crossing.

Most impressively, this wealth of information is contained on a slip of tough, flexible plastic that measures only four inches by seven inches (about 10cm by 18cm)—small enough to fit in a field guide or shirt pocket. Jan Johnston-Tyler of EvoLibri Consulting, the technical communication consultant responsible for squeezing all the tools into such a confined area, confesses that there were times she thought it couldn't be done. When she started on the project, she was given a first draft produced by a graphic artist. Johnston-Tyler knew right away it wouldn't work.

"It valued form over function," she says of the original draft. "It was done in *Quark*, and it was clear that [the artist] had no idea how to convey technical material."

Working in Adobe *Illustrator* with a CAD plug-in, Johnston-Tyler began to redraw the entire tool. The original contained fewer than half the tools that Brooks wanted to include. Fitting them all proved tremendously difficult; often, Johnston-Tyler worked with her screen view set to 3,200 percent. "There were many times it was 12:30 at night and I thought, 'I give up,'" she says.

Through two months of development, Johnston-Tyler had several small breakthroughs that kept her going. She found that she could save space by overlaying some of the scales, using color to distinguish one scale from another. For days she struggled to fit the necessary warning statement—"Proper use of this information requires expert training!"—with no luck; she finally made it work by printing the words in an arc above the compass rose. Another victory occurred when she talked Brooks out of trying to include latitude and longitude marks, which are typically used only for helicopter rescue. (Brooks is developing a foldable large latitude and longi-



tude reader for emergency use.)

Since the intended audience of the All-in-One Map Tool would be relying on it in inherently dangerous conditions, Brooks submitted the product to round after round of review by professional cartographers, ski guides, mountain guides and avalanche experts. The final word came from a cartographer, who verified that the tool is accurate within $1/128$ th of an inch. The standard acceptable variance on small topographical maps is 1 percent, approximately $1/64$ th of an inch.

But accuracy wouldn't matter much if, like other tools, the All-in-One Map Tool broke in the field. So Brooks took the tool to a trade show and asked someone to try to tear it. "A day later he came back, and he had managed to put a divot in it, probably with a nail," Brooks said. "That was it." ◉