

IBM scientists create the smallest 3D map of planet Earth

18 January 2012, by Steve Hamm



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An achievement made last year by IBM scientists can't really compare with the largest collection of Charlie's Angels memorabilia (5,569 items), the most body piercings in one session (3,900) or the longest cucumber (47 inches), all Guinness World Records, but IBM's nanotech experts have attained a Guinness record of their own. Their feat: creating the smallest 3D map of Earth.

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The Guinness World Record organization recognized the handiwork of IBM scientists in Zurich, Switzerland, and Almaden, Calif., in its new book, Guinness World Records 2012. (Officially they are no longer called the Guinness Book of World Records.)

Unlike many other Guinness participants, the scientists weren't motivated by a desire for 15 minutes of pop-culture fame. Rather, they created their tiny map to demonstrate a breakthrough in

the miniaturization of complex structures. They expect their techniques to open new prospects for developing nanoscale objects in a variety of fields including electronics, medicine, life sciences and opto-electronics.

How did the IBMers do it? They used a tiny silicon tip with a sharp point - 100,000 times smaller than a sharpened pencil - to create the miniature patterns. The etching technique is very similar to how the ancient Egyptian's used chisels on stone to create drawings and hieroglyphics.

Since some members of the [IBM](#) team are avid mountaineers, they also created a 25-nanometer-high 3D replica of the Matterhorn.

True, neither the tiny Matterhorn nor the tiny Earth [map](#) compare for sheer weirdness with the record for the greatest distance traveled with a pool cue balanced on the chin (5,472 ft 9 in), but, heck, they're pretty darn cool.

Provided by IBM

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