"The question is no longer 'Should we model?', but rather, 'How do we model effectively and efficiently?'"

Jon Holt

Co-owner, Scarecrow Consultants Limited; Professor of Systems Engineering, Cranfield University

Place of Birth: Helston, England, United Kingdom
Current Residence: United Kingdom

Domain: Model-based Systems Engineering (MBSE)
Years in systems engineering: 20
Year joined INCOSE: 1999
Role in INCOSE: U.K. Technical Director

How has MBSE changed over the past 25 years?

I have seen significant changes in modeling both in terms of the techniques and tools and of its adoption in industry, academia and government. Over the last five years, in particular, there has been a marked change in attitude towards modeling. The question is no longer "Should we model?", but rather, "How do we model effectively and efficiently?"

What has been your most fun and/or challenging systems engineering project?

In 2010, I was asked to produce a demonstration model for a real-time, safety-critical system to prove that systems modeling can be applied to critical systems. The system was an upside-down straitjacket escape on a burning rope that I, along with my colleagues Mike Brownsword and Simon Perry, modeled, and then I performed. The biggest challenge was convincing my family that it was a good idea!

We've heard that you use magic and mind-reading to promote systems engineering and other science, technology, engineering and mathematics (STEM) topics. Please explain?

I believe that a key part to the success of engaging people with STEM is to make it interesting. Since I am also a professional magician, it seemed like a natural fit: Both require effective people, process and tools; both produce miracles under seemingly impossible conditions and, when done properly, both should leave the audience wondering how you pulled it off! I regularly perform at science festivals, public events and on various radio shows.

I recently also wrote a children's book to encourage children at Key Stage 2 (ages 7-11) to consider engineering when they make their options at school, and also to provide an engaging resource for engineers involved with STEM. The book is called "Think Engineer" and will be published by INCOSE U.K. in November 2015.