UK Channel 4’s ‘Grand Designs’ demonstrated how 3D computer models generated using Pointools software kept one of the most challenging builds ever seen on ‘Grand Designs’ on schedule and error free. A recent episode of the popular UK TV show applied a Pointools plug-in for AutoCAD to compare a 3D point-cloud model of ‘just-built’ items with architectural designs to identify potential errors. Measured in minutes using a 3D laser scanner, the model eliminated the risks usually associated with very tight construction tolerances to keep the project on time and on budget.

Helen Seymour-Smith, the project architect and client explained that she used the scanner to check all of the formwork just before the slab was poured. "After only 3 seven-minute scans, we had a complete 3D model of the site which enabled us to overlay our CAD drawings to double-check that the formwork was accurately located on site." This was particularly vital for the ply box-slots around the slab edges that the pre-cast concrete wall panels would sit in.

Seymour-Smith explained the risks they faced, "Had we got this wrong, the panels simply wouldn't have fit - and unlike a bit of wood, concrete panels such as these can't be reshaped on site." The cost of getting it wrong would have been immense. The team would have been forced to cut into the floor slab, compromising its structural integrity and wasting precious time and money.

"Helen's approach and success on her project is testament to the value of 3D laser scanning," explained Joe Croser, VP of Products for Pointools. "With unrivalled point cloud processing speed, and unmatched interoperability across multiple application platforms, our software is often the first choice for architects like Helen that want to coordinate 'just-built' items with 'as-designed' drawings and models in real-time on site."