

# A Model Example

Ticodi developed its Model Review Comment System after extensive experience in the Oil and Gas industry with solutions that didn't quite hit the mark. David Chadwick reports

I was not very far into the Model Review Comment System (MRCS) from Ticodi, when I came to a remarkable realisation. MRCS was refreshingly different from other review systems that I had used, to say the least. Its unique method of capturing drawings and other images, alongside oodles of space for posting the subsequent comments, is truly original. The program includes a comprehensive set of facilities for managing the comment process, securing approvals and managing revisions.

As I continued to glide through the fresh visuals and framework of MRCS, I rapidly became well acquainted with its tools and mechanisms. Needing to set the software in context to determine why such an original approach had been chosen, I spoke to Simon Liddicot, the Director of Ticodi.

Simon has worked in a CAD Co-ordination role for large companies in the Oil and Gas industry for quite some time now. He has been largely involved with setting-up and running model review meetings; an important stage within the design process. After witnessing a large number of companies utilising clumsy Excel spreadsheets to enter review comments, he realised that this vital stage required a simple, yet efficient and powerful tool for recording, reviewing, approving and reporting model review comments. The result of

this spark of inspiration is MRCS.

A large UK Oil and Gas company agreed to be involved with the first beta version of MRCS, enabling Ticodi to test the application within an actual project to resolve software issues before releasing it. Subsequently, MRCS v1.0.0 was released, tried, tested and proven to be a valuable tool in the field.

Simon Liddicot admits that although there are applications available on the market which allow users to review 3D models and have the ability to store model-review comment tags, he - and the Ticodi team - felt that the comment-storing capabilities within such software was largely lacking in functionality and contained numerous limitations, such as:

- No intuitive or customisable forms for repetitive data entry
- Comments could only be reviewed from installed software applications, leading to costly installations on a number of users' machines
- No secure Engineer and Client approval mechanism, and therefore no auditable trail
- They provided no means of including before-and-after review-comment images, making checking awkward.
- The reporting tools were somewhat basic

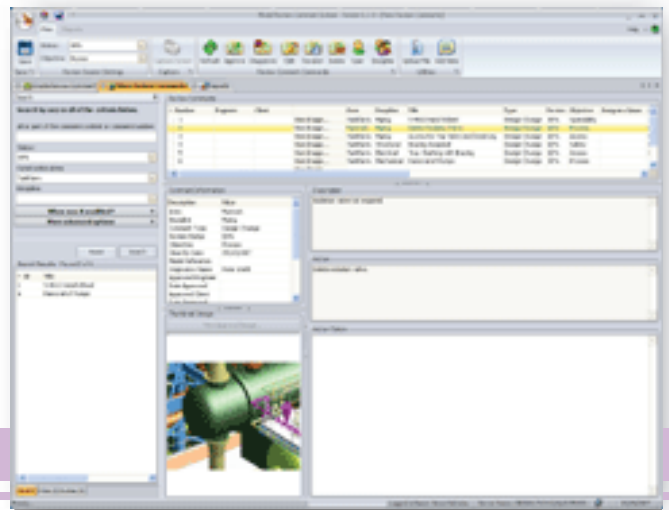
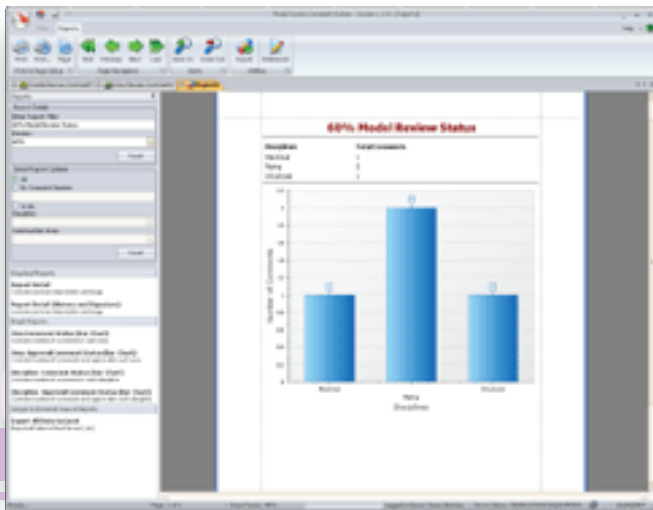
In the face of such glaringly obvious limitations, Ticodi responded by

developing an application that would not only resolve the myriad shortfalls of these applications, but which would also provide a very flexible tool allowing the capture and recording of a review comment from any CAD application; hence the unique screen capture functionality. This allows the initial review-comment screen image to derive from any CAD and review software and also allows the designer to capture an image from a second 2D and/or 3D design application if required.

MRCS not only enables Engineers and Clients to review comments but, more importantly, allows designers to have the application installed on their design computers, thus permitting easy and effective review, resolve and comment on their original model review comments.

Ticodi also decided upon flexible licensing for MRCS with a site-wide scheme, for companies to install unlimited copies of the software on one site and eliminates the expensive and fussy need for continual licensing.

After logging on, users of MRCS are presented with a simple screen layout; all the options and commands are presented at the top of the screen and a status bar sits at the bottom. The options are divided between Session settings, a Capture Image Button, the Review Comment Commands, and a Utilities section. Access to the Main



Menu is also fittingly unique; an Icon in the top left hand corner of the screen drops down to allow users to Create Review Comments or Remarks, to View them, to Generate Reports, and to set up the Screen Capture Region. An additional button switches users into the easy-to-use administration mode.

In the Review Session settings you can alter the review status and objectives (previously set up by the user). It presents the stage - usually as a percentage - achieved and objectives for the current session.

It's the Screen Capture utility that is most intriguing. Whatever section of a drawing, 3D model, schematic, or image you wish to capture runs in the background. Using the Screen Capture utility, the user specifies a rectangular space in MRCS that will encompass that section of the screen upon which the user desires to focus. Clicking on Screen Capture button automatically grabs the underlying image.

Returning to the Main Menu, users can then open Create Review Comment, which pulls down an input form adjacent to the image, itself displayed on the right-hand side of the screen. This allows Model Tag names, Titles, references, deadline dates and issues to resolve to be entered, the type of issue i.e. a clash or design change, and the engineering discipline required to resolve it. The originators name is requested, with two large boxes to enter the comment and suggested course of action.

Creating Review Remarks allows users

to store non CAD model review comments - such as actions of meetings, comments about the design and so on - in an entirely flexible manner.

Viewing Model Review Comments displays all information about a model review comment in one form, though split into a number of easy-to-digest sections. The Review Comments form lists all of the model review comments within the project so that users can easily identify the model review comment before selection. This provides information on the unique model review comment number assigned by MRCS, the project engineer and the client who approved the comment, as well as the date and time the comment was saved. Another button, when clicked, displays a scale view of the comment in a separate form.

Comment Information displays a scrollable list of additional information, showing similar information, but adding review status, objectives, comment type, and so on. A thumbnail of the captured image used for the comment is also displayed. Clicking on this brings up a 1:1 scaled image for closer inspection. MRCS users can work on a number of images and model review comments at the same time using the View Comment Image form and switch between these.

An advanced search feature allows users to search for comments using a number of criteria by way of a search form that drops down when the View Review Comments form is visible. Using a number of text boxes, drop down and

option buttons, users can seek out any desired scenario.

The most important aspect of document reviews is, naturally, the follow through process; documenting the approvals and actions taken to resolve the comments. MRCS is devised to ensure complete traceability of model review comments and even allows thumbnail sketches of resolved images to be saved with the comments after approval. Additional functions allow users to add other notes, file links to review comments, and to create model review comment revisions linking comments to other disciplines.

Reports can be produced in tabular graphical and statistical formats, and displayed using the existing MRCS reporting tool, or exported in a number of formats - PDF, CSV, Excel, Rich text and graphical images.

## CONCLUSION

The originality of MRCS is underpinned by an extremely user-friendly sensibility. Having worked through some examples, the logical processes of all sections swiftly became apparent; even the unique method of capturing images. The whole application fulfils its prime purpose extremely efficiently. The issues that Ticodi set out to address have been resolved through the MRCS system in an organised, capable and admirable fashion that should resolve all administrative and comment-related headaches.

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