So far, so good?

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"Perspectives in CEM" has been running for a few issues in the current form. I thought it would be appropriate to provide a brief recap of the themes that have been developed. Why do this? Some of the following issues will be written by other people and a review here might serve to encourage more personal perspectives. So if you have opinions, views, experience or observations on these (or other) topics that you would like to share with the rest of the ACES community, please contact me.

Electromagnetics Education

"A New Modelling Army" and "The Lives of Subjects" asked whether we should turn the traditional method of teaching electromagnetics on its head and, effectively, leave an understanding of the mathematical basis of electromagnetics until a later stage in an undergraduate course. The result of doing this could be that there will be more engineers able to drive packages without having the detailed mathematical understanding. A conclusion was that

"Should we concentrate on developing practical skills, first, in the many and mathematical skills later in the few? Perhaps it is time to move on, and concentrate on ensuring that more students have skills in doing the basics, such as simulating and visualising field behaviour and are able to identify when something is 'not quite right' or understand the basic limitations of their chosen modeling approach. Of those that get beyond a general understanding of fields, they can be more formally educated with a strong mathematical and analytical understanding. In doing this our New Modelling Army will be well trained, well organised and the discipline itself will be well constructed. Hopefully, our Ironsides will be well and regularly paid and will be able cast their influence widely and for a long time."

'Good Enough' Modeling

"Satisficing in Computational Electromagnetics" and "Keep it Simple" were based on a straightforward proposition:
> Where time issues are important in simulations, we do not generally need to strive for fine resolution and high accuracy. In many cases, the questions being answered through modelling can be best addressed by 'sub-optimal' models which deliver acceptable results in an acceptable time using an acceptable platform.

An approach to achieving a satisficed, or good enough, result was suggested:

1. Consider what the goals of the activity (experiment, simulation) are.
2. Determine the range of parameters and associated collection of values that must be met for those goals to be satisfied.
3. Use "Five Whys" to explore these reasons in depth.
4. Iteratively create models and dry-run them to see if they meet the constraints, on a "Go"/"No Go" basis before proceeding with the actual simulation.

The idea of not using any more detail than you need to has been around for over half a millennium yet it is not uncommon for modelers to get quite upset if assumptions and presence of errors are accepted *a priori* and their precision tool is being used in an imprecise way.

Peer review

"Anonymous Peer Review. Time To Move On?" asked whether we should move more open peer reviewing rather than continuing with anonymous peer review. It discussed three points:

1. Anonymity allows referees to say what they really think about a paper. Promoting objectivity.
2. If you are not prepared to put your name to a comment, should you really make it? Promoting ethical reviewing.
3. Misunderstandings are human and often resolved through dialogue. Promoting the communication of science.

One question that was implied by this article was whether we are tied into anonymous peer review largely because that is the way it has always been done in our community.

This "Perspectives" has taken some, but not all, of the themes that have been discussed over the last couple of years and tried to capture some of the main points being raised in them. Please feel free to vehemently disagree with anything I have said, passionately support it, or just ask more questions. I would like to invite anyone in the ACES community reading this to have your say, put across your perspective on any of the above themes or just share your experiences.