

Collision Avoidance Work Group

2nd meeting, Shell's Rijswijk offices, 22 February 2007

Present: Bill Allen
Andy Brooks
Steve Grindrod
Stein Harvardstein
Angus Jamieson
Dave McRobbie
Wayne Philips
Benny Poedjono
Calum Shand
Regis Studer
Torgeir Torkildsen
Harry Wilson (group leader and minutes)

Observers: Alan Heath
Anne Holmes

Apologies: Bill Calhoun
Jim Towle

Introduction

Three new group members, Bill Allen (BP), Calum Shand (Shell) and Torgeir Torkildsen (Statoil), were introduced.

Item 1, Restate Group's Objectives

The Group's objectives were restated.

From the minutes of the first meeting:

1. Education
 - Bibliography
 - Lexicon
 - Description of current methods
 - Followed by details of strengths and weaknesses
2. Review of current methods
 - Recommend best practices
 - with explanations and exceptions
3. Investigate novel techniques
 - Describe, comment and recommend

Bill Allen expressed concern about the second objective, Recommend best practice. He felt that many observers would treat such a recommendation as a "cure all" standard and would not appreciate that the management of the process of collision avoidance is as critical as the choice of rule to be used. (Very similar to the TS's concern that a standard error model is prone to misuse without an accompanying set of QC controls.)

Regis Studer asked if the Group could not make a recommendation on minimum slot spacing, since Facilities engineers push for closer and closer spacing. It was agreed that the Group would not include this in their remit, but it might be something to be tackled in a later project.

Item 2, Review of progress on objective 1

Bibliography

Currently includes references to magnetic ranging papers and patents and also a reference to an internal BP document. It was agreed that ranging is not directly enough related to our objectives, and that it was not appropriate to reference the BP document. Also that formatting should be according to SPE guidelines for references.

ACTION. Remove ranging and BP document references (AB, soonest)

It was agreed that the document was ready for publication once the agreed changes had been made.

ACTION. Publish on web site (SG – by end March)

It was questioned whether Position Uncertainty literature shouldn't be included, since it was directly relevant. It was agreed that it was reasonable to have a separate bibliography dedicated to position uncertainty.

ACTION. Produce position uncertainty bibliography (AB – end of April)

ACTION. Copy Andy Brooks with existing Position Uncertainty bibliography to provide starting point. (SG soonest)

Lexicon

The lexicon is split into 2 sections, Collision Avoidance terms and related Position Uncertainty terms. The Group worked through the Position Uncertainty terms, noting corrections. Discussion of the terms Major axis and Minor axis identified that there are multiple definitions of certain terms. It was agreed that all definitions should be included. Regis pointed out that there was even misunderstanding within this expert group regarding the terms that attempt to define the ellipsoid. He felt that we would have done a great service if we could remove such confusion, and perhaps recommend our preferred set of ellipsoid definitions.

SPE Wellbore Positioning Technical Section

Time ran out before the Collision Avoidance section could be reviewed.

It was noted that such a process of group review was inefficient, but that no one (except for Stein Harvardstein) had found time to review the document in the month or so preceding the meeting that it had been available.

It was agreed that an updated version would be provided to a smaller group consisting of Andy Brooks, Dave McRobbie, Wayne Philips and Torgeir Torkildsen. They would then refine it (probably via conference call) and make it available for final review by the whole group prior to publication on the web site.

ACTION. Revise both sections based on Group discussion of 22 Feb and release to the newly defined "authorship group". (AB. 9 March – now extended to 19 Mar)

Authorship group conference call (12 March. Delayed. To be agreed, but suggest 22 March)

Release revB to rest of Group for review (AB. 19 March – extended to end March)

Feedback (Group. 15 April)

Finalise for publication (Author group. 30 April)

Publish on Web site (SG. 1 May)

Harry Wilson reported that he had not yet begun work on his action items from the previous meeting; to produce a draft description of current methods, and to run a comparison of Closest Approach versus Travelling Cylinder methodologies, assuming the same collision avoidance rule.

ACTION. Complete draft of Current Common Practice and distribute for review. (HW. Before next meeting)

ACTION. Run 3D vs TC collision avoidance comparison. (HW. For discussion at next meeting.)

Item 3, Review of progress on objective 2

It was agreed to avoid use of the "recommendation" and it was generally agreed that a similar outcome could be achieved via the strengths and weaknesses item of objective 1. The second objective is therefore dropped.

In response to Bill's concern (see Item 1), it was agreed that some general statements on the limitations of any collision avoidance rule should be included in objective 1's Description of Current Methods.

Item 4, Review of progress on objective 3 (now objective 2)

Harry noted that, at the current rate of progress, it could be some time before the Group could turn its attention to this objective, but that Torgeir had some good news to report.

Torgeir described a Statoil project whereby a post graduate student will be given collision avoidance as the theme of his Masters degree. It is intended that the student will investigate methods of quantifying probability of intersection. His study will include analysis of statistical distributions that might be more appropriate than the normal distribution that is currently used. His work will be made available to the Group.

Item 5, Next meeting

Probably to coincide with the next WP TS meeting, but important to meet action item deadlines in preparation for then.