GexCon
A company in the CMR Group

MINUTES OF MEETING

Meeting	**:**	**FLACS USER GROUP WORKSHOPS AND MEETING**
Venue	**:**	**GexCon AS, Fantoftvegen 38, Bergen, Norway**
Date	**:**	**April 28th-29th, 2005**
Prepared by	**:**	**Hans-Christen Salvesen, Idar Storvik, Olav R. Hansen**

Participants:

Chris Savvides	BP
Catherine Guegen	Rhoditech
Kari Fredriksen	Akerkværner
Annette Urheim	Safetec
Bernt Natvig	Scandpower
Anett Kristensen	Scandpower
Yngve Tranøy	Scandpower
Jens K. Holen	Statoil
Malika Madoui-Barmasse	GDF
Cyrille Fleury	GDF
Daniel Albrecht	Tractebel
Olav Roald Hansen	GexCon Software
Idar E. Storvik	GexCon Software
Hans Christen Salvesen	GexCon Software
Ole Jacob Taraldset	GexCon Software
Jan Roar Bakke	GexCon
Solveig R Ryum	GexCon Consulting
Jerome Renoult	GexCon Consulting

Additional Distribution: FLUG mailing list

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1. Welcome

Olav R. Hansen (GexCon) wished welcome to the FLUG workshops and meeting.

2. FLACSv8.1 workshop, Thursday 28th April

Olav R. Hansen went systematically through new features in FLACSv8.1. Such new features are described in "FLACSv8.1 RELASE NOTES", by O. R. Hansen, I. E. Storvik, H.-C. Salvesen, Rev. 01, 4th March 2005.

Chris Savvides (BP) asked if a systematic list could be made available where options are stated that can be in a setup file and similary options in a cs-file.

Using updated version of FLACS, the created cs-file will now in general contain information about the scenario template employed. The first two lines of a cs-file could e.g. be like:
VERSION 0.5
%TEMPLATE="_v8.1/scenario/default"
In the future it could be useful to gather a library of useful scenario templates.

Chris Savvides (BP) commented the need for updated FLACS manuals. Good examples of best practice on the web site could to some extent help, but an upgrading of the basic FLACS manual must be done some time.

3. Workshop, R&D and user experiences, Friday 29th April

Olav R. Hansen presented ongoing research and development work at GexCon, concerning LNG, hydrogen, DESC, dispersion, FLACS-EXPLO. In FLACS-EXPLO some deviations may be seen comparing simulation and experiments. May be introducing helium (instead of pure air) in the balloon model in FLACS-EXPLO can improve the simulated results.

Jerome Renoult (GexCon) presented a probabilistic explosion analysis in an onshore plant. The so-called Anticipated Congestion Method is an important part of the work during the analysis. With the present technology it takes significant time to build up manually a geometry representation for a large plant, 6-8 weeks of work is not unusual.

The usefulnes of better documentation of best practice of FLACS, was discussed further. This includes guidelines on the web pages of FLUG.
Olav R. Hansen asked the participants whether it was interest for inviting selected academic FLACS users. When a specially invited academic FLACS user can contribute on a topic of general interest for the FLUG members, it seemed to be interest for this.

The possibility to combine a FLUG meeting with a conference of interest for the FLUG members, was mentioned. Another possibility is to focus on a specific topic as part of the FLUG meeting, say once a year (one of the candidates for such a specific topic could for example be FLACS modelling of hydrogen explosion). To visit the experimental test site at Sotra during a FLUG meeting in Bergen, was mentioned by Jan Roar Bakke (GexCon) as a possibility. Ole Jacob Taraldset (GexCon) mentioneded the possibility to arrange say a half-day FLACS course in connection with the FLUG meeting for those interested.

4. FLACS user group meeting Friday 29th April

The FLUG chairman Bernt Natvig (Scandpower) welcomed and the agenda was adopted. The proposed minutes of the previous meeting were considered for comments.

4.1 Planned FLACS R&D etc.

GexCon will model further release and evaporation of LNG. There is an LNG-project with kick-off meeting 20th May 2005, project participants are so far Total, Statoil, PTIL and Norsk Hydro.

Idar Storvik (GexCon) told about plans for redesign of the FLACS pre- and post-processor, where the new development is portable to every relevant platform, including MS Windows.

Daniel Aelbrecht (Tractebel) raised the question of compiling FLACS so that larger output files will be possible. This has been done after this FLUG meeting. Earlier FLACS has been compiled using routines so that a single file could not be larger than ca. 2.4 Gbyte (limited capacity of the file pointer). FLACS is now (per 10th May 2005) compiled with options allowing for much larger files (in principle the capacity of the file pointer allows a file with size in the order of 1 million Tbyte).

The functionality to export FLACS simulation results to other formats that can be read by other general purpose post-processors (not made by GexCon), was mentioned as a wish for future deveopment.

Daniel Aelbrecht (Tractebel) raised the question of including nitrogen as a standard gas in FLACS where you may set the nitrogen content more freely than in the present FLACS version. Daniel Aelbrecht also mentioned the possibility to model electrical explosions in FLACS. In such electrical explosions a large amount of energy may be released in a short time during a short-circuit. The fluid near the short-circuit heats up quickly and a pressure wave evolves.

Olav R. Hansen mentioned some relevant conferences in the future, among others the 21st Annual CCPS International Conference in April 2006, Orlando, Florida.

Yngve Tranøy (Scandpower) made a short presentation concerning hydrogen and the Joule-Thompsen effect. The topic was shortly discussed.

4.2 Next FLUG meeting

Next FLUG meeting in the autumn 2005: Venue and date were briefly discussed, but will be decided later.