MINUTES OF MEETING



FLACS USER GROUP WORKSHOPS AND MEETING

Place: GexCon AS, Bergen, Norway
Date: 11-12 May 2006
Prepared by: Hans-Christen Salvesen, Olav R. Hansen.

Participants:

Chris Savvides	BP	Sunbury, UK
Malika Madoui-Barmasse	Gaz De France	St Denis, France
Gauthier Polet	Tractebel	Brussels, Belgium
Andreas Obrist	SKS	Zurich, Switzerland
Kari Frederichsen	AkerKværner	Oslo, Norway
Kjetil Kristoffersen	AkerKværner	Oslo, Norway
Anette Urheim	Safetec	Trondheim, Norway
Yngve Tranøy	Scandpower	Bergen, Norway (only Thursday)

Olav Roald Hansen	GexCon Software
Idar Storvik	GexCon Software
Hans Christen Salvesen	GexCon Software
Jens A. Melheim	GexCon Software
Trygve Skjold	GexCon Software
Prankul Middha	GexCon Software

Jerome Renoult	GexCon Consulting (only Thursday)
Ellen Østerbø	GexCon Consulting
Lars Rogstadkjernet	GexCon Consulting

Further participants from GexCon Consulting

With bus to test site demo:
Matthew Lycke, GexCon Consulting
Tina Almhjell, GexCon (Student)

Representatives from DuPont and a couple of other companies participated partly through teleconference.

Additional Distribution: FLUG mailing list

1. Visit Sotra test site

The participants were invited to Sotra test site to view large scale gas explosion experiments. Two explosion tests were performed, one with methane and one with propane. Due to some problems with the gas analyser, a too high gas concentration was prepared for the methane test, which gave a very weak explosion. For the propane explosion the mixture was closed to stochiometry, and a much higher explosion pressure was achieved.

2. Welcome

Olav R. Hansen (GexCon) wished welcome to the FLUG workshops and meeting and gave a brief overview of the ongoing R&D activities and plans for near future.

3. Workshop, FLACS R&D, Thursday 11th May

FLACS-HYDROGEN related R&D was the topic for the first presentation. Prankul Middha presented status in ongoing work on the prediction of DDT with hydrogen explosions. Olav R Hansen presented some simulation work performed in the HYSAFE project.

The second topic was geometry import to FLACS. Ole Jacob Taraldset did a presentation of the status of geo2flacs, and gave a demonstration of geometry import.

Olav R Hansen thereafter presented status of dispersion activities, and gave an update of the recent LNG-validation activity.

Jens Melheim gave a presentation on the status of the FLACS-FIRE development. He presented some work on alternative flame models for fire simulations, and indicated that a first version of FLACS-FIRE will be a part of the FLACS release first half of 2007.

At the end of the day, Trygve Skjold gave a presentation about DESC, and the status of dust explosion modelling.

4. Workshop, user experiences and guidance, Friday 12th May (before lunch)

In the morning session there were some presentations by users.

Ellen Østerbø, GexCon Consulting, presented some work looking into the effect of variable amounts of CO2 on explosion consequences.

Lars Rogstadkjernet, GexCon Consulting, presented work on secondary explosions in connection to transformer failures.

Gauthier Polet, Tractebel, presented work on massive LPG releases and safety considerations in that connection.

At the end of the workshop, Olav Hansen did a quick presentation on best practice grid guidelines for different situations.

5. FLACS user group meeting, Friday 12th May (after lunch)

Olav R. Hansen (GexCon) welcomed and the agenda was adopted.

David D. Herrmann (DuPont) mentioned the wish for FLACS user guidance for new users.

The new Managing Director of GexCon, Øystein Larsen, gave a short overview of the activities of GexCon.

Going through minutes from last meeting, etc.
It was commented that FLACS course notes are wanted available on the web site, including complete set of simulation files.

With the new scenario template, the need for a setup file (in addition to the usual scenario file) is now less frequent. And the updated version of FLACS can now handle much larger output files than earlier (earlier could be problems if one wanted output file larger than about 2.4GB).

Prankul Middha (GexCon) gave a summary from the FLACS User Group Meeting at Disney Dolphin Hotel, Orlando, Florida, USA, April 27, 2006. More details is found in the attached minutes from this meeting.

Traditionally the FLACS users have employed a C shell (e.g. tcsh, csh) as command interpreter in Linux/Unix. However, a file with definitions of environment variables when using a bash shell (instead of a C shell), is now included in the standard FLACS program package.

Chris Savvides (BP) expressed the wish to know more about who are the FLACS users around the world. Most contacts can be found at the FLUG-member list.

Development of new user interface for FLACS.
Idar Storvik (GexCon) gave an overview of the ongoing work and plans for porting FLACS code to a new version based on Qt being an application development framework that can be used on many platforms. This implies that in the future it will be possible to run FLACS on computers using Microsoft Windows operating system, in addition to computers using Linux operating system. The application development framework Qt is used among others by Adobe, Skype, HP, IBM, and KDE.

FLACS v8.1 updates.
Idar Storvik (GexCon) gave an overview of updates, FLACS v8.1. The FLACS license checker is improved for better functionality and robustness. Using a cs<job no.>.MON file, it is possible to have more than one monitor region for each simulation. Malika Madoui-Barmasse (Gaz De France) said that she would like to be informed when any new bug is found in FLACS. A way of informing the FLUG members about significant newly found bugs, is to send a message to flug@gexcon.com (the FLUG members) or to add a message on the FLUG web site.

Support service for FLACS users.
Hans-Christen Salvesen (GexCon) told shortly about the support service for FLACS users.

Discussions future wishes and development.
Andreas Obrist (SKS) expressed that he was glad that there are plans to include fire modelling in FLACS. Chris Savvides (BP) was not sure if this was the best way to go.

Chris Savvides (BP) mentioned that it may be useful some times to have a quick view at geometries without necessarily using casd. The tool ivview, a fast, interactive 3D viewer of Inventor files (Linux), may be good alternative here.

Olav R. Hansen said that input to GexCon from the FLUG members concerning new joint industry projects, are welcome.

David D. Herrmann (DuPont) mentioned that it would be helpful to extend FLACS with other flammable materials or make better guidance on how to include user-specified fuel in FLACS.

Chris Savvides (BP) mentioned the aspect of blast propagation in FLACS. Olav R. Hansen (GexCon) said that an extended validation base for blast simulations is wanted, especially relatively far away from the source of the blast wave.

Andreas Obrist (SKS) mentioned the value of using FLACS results as input to structural response codes.

Election of FLUG chairman.
Chris Savvides (BP) was elected new FLUG chairman.

New FLUG meetings, workshop topics, any other business.
A possibility is to combine the next autumn (in October or November) FLUG meeting with a one day open meeting for the industry. The venue might be in Zurich in cooperation with Andreas Obrist (SKS). During spring 2007, a possibility is to have a FLUG meeting in Houston for FLACS users in that region (in addition to a spring meeting in Bergen, Norway).

Actions:
GexCon should improve the communication to users about bugs, when required bug-reports should be issues.