

TANGO Progress Meeting #2 – Meeting Notes

Date of Meeting: 3rd & 4th February 2014

Location: ICSR Building, Hall 2

Indian Institute of Technology Madras, Chennai

Distribution of Meeting Notes to all shown below

Present:

TANGO Partners and Fellows:

Dmytro Iurashev	Ansaldo Energia (AE)
Paul Hix	Deutsches Museum (DM)
R.I.Sujith	Indian Institute of Technology Madras (IITM)
Driek Rouwenhorst	Ingenieurbüro für Thermo-Akustik (IfTA)
Maria Heckl (Project Co-ordinator)	Keele University (KU)
Alessandra Bigongiari	Keele University (KU)
Nalini Mukherjee	Keele University (KU)
Aswathy Surendran	Keele University (KU)
Gunilla Efraimsson (Deputy Co-ordinator)	Kungliga Tekniska Högskolan (KTH)
Susann Boij	Kungliga Tekniska Högskolan (KTH)
Luck Peerlings	Kungliga Tekniska Högskolan (KTH)
Wei Na	Kungliga Tekniska Högskolan (KTH)
Jonathan Tournadre	LMS International (LMS)
Muttalip Temiz	Technische Universiteit Eindhoven (TUE)
Wolfgang Polifke	Technische Universität München (TUM)
Alp Albayrak	Technische Universität München (TUM)
Lin Strobio Chen	Technische Universität München (TUM)

Invited Guests:

Gopalakrishnan.E.A	Indian Institute of Technology Madras (IITM)
Vishnu R Unni	Indian Institute of Technology Madras (IITM)
Vineeth Nair .V	Indian Institute of Technology Madras (IITM)
Meenatchidevi M	Indian Institute of Technology Madras (IITM)
Vinu Varghese.p	Indian Institute of Technology Madras (IITM)

Apologies from:

Alan Cummings
Federico Dacca'
Joan Teerling
Jan Krueger
Jakob Hermann
Fenella Webster (Administrator)
Edgar Fernandes
Wim Desmet
Hans Bodén
Johanna Ingenito
Estelle Laurendeau
Paula Martinez-Lera
Ralf Corin
Rick Scholte
Naseh Hosseini
Mico Hirschberg
Ines Lopez Arteaga
Alessandro Bottaro

Ansaldo Energia (AE)
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Katholieke Universiteit Leuven (KUL)
Kungliga Tekniska Högskolan (KTH)
Liebherr-Aerospace Toulouse SAS (LTS)
Liebherr-Aerospace Toulouse SAS (LTS)
LMS International (LMS)
Sontech AB (SON)
Sorama (SOR)
Technische Universiteit Eindhoven (TUE)
Technische Universiteit Eindhoven (TUE)
Technische Universiteit Eindhoven (TUE)
University of Genova (UG)

Presentation Material

The progress meeting presentation slides are supplied in PDF format for reference with these meeting notes and are also available to view in the 'Meeting Agendas and Minutes' page in the members' area on the TANGO website, along with Paul Hix's meeting presentation. <http://www.scm.keele.ac.uk/Tango/tango-network-meetings/>

The TANGO fellows' presentations can be found on the 'Fellow Presentations' page <http://www.scm.keele.ac.uk/Tango/tango-network-fellows-presentations/>

Welcome

Maria welcomed all those present at the meeting and invited everyone to introduce themselves. Maria explained that Naseh Hosseini was unable to attend due to visa problems.

Practicalities

Maria introduced Sujith's PhD students, Gopalakrishnan, Vishnu, Vineeth, Meena and Vinu, who were able to help with advice about the campus and local knowledge during the visit.

Report by the coordinator on recent developments

Recruitment

12 fellows are now in place, all present at the meeting except Naseh), but two fellows due to work at IITM with Sujith are having problems with their visas for India. We are hopeful that they will join the project in a few months' time, but they have missed the 36 month contract window. Consequently, an additional post has been created to use the 'spare' funding, with the creation of a smaller project 6 month fellowship.

In addition the 8 month ESR at Ansaldo is yet to be filled, although Maria believes a candidate has been identified for the post.

Financial update (payment of 2nd instalment)

All second year payments that were due have been made. The next financial period will be after the end of the 1st reporting period, ending 30th November 2014. Form C financial reports will be due in December.

Consortium agreement

The consortium agreement is the agreement made between the TANGO partners; it is not determined by the EU. It has not been signed yet although most of the issues are now resolved. This is a matter for the legal departments to progress and nothing that can be dealt with at the TANGO meeting.

The consortium agreement covers IP issues. At the last meeting there was a query about IP: *What happens with IP if a TANGO fellow works in a group with non-TANGO researchers?* In this situation, all the participants must keep confidentiality; all are covered by the TANGO consortium agreement. It is the institution that has signed up to the agreement, not the individuals participating in TANGO.

Susann asked for an example of this, for illustration, since not everything will be confidential. Maria suggested this would cover the latest research findings; Gunilla suggests geometries, briefs and set-ups would be regarded as confidential. Maria points out that the contractual agreements, available on the website, are also confidential.

Wolfgang queried the situation when a TANGO fellow has contributed to research that is not part of the TANGO project. Maria advises that these would be outside the scope of TANGO so separate from it.

Gunilla suggests that the TANGO confidentiality agreement in practice would be the same as the institution's usual confidentiality practice, and that its implementation needs sensible application, since of course it is not practical not to speak to anyone!

1st progress report to European Commission

The first progress report was a scientific report, with no financial element necessary. Maria consolidated the fellows' individual contributions into one report to the EU and emailed this report to the EU project officer at the end of November 2013. This report is on the TANGO website.

<http://www.scm.keele.ac.uk/Tango/tango-network-european-commission/>

The online submission was not possible at that time due to problems experienced with the EU SESAM website, which is having a major overhaul for Horizon 2020. Fenella is working on the online submission.

Post meeting note: The report was submitted via the EU website SESAM on 25/February/2014.

ICSV21 in Beijing, July 2014

Maria is pleased to report that most fellows have submitted abstracts. For the conference as a whole there had been more than 750 abstracts submitted when Maria last checked shortly before the deadline.

Two Tango members are organising abstract sessions;

Hans – Flow Duct Acoustics and Mufflers (13 abstracts submitted so far)

Maria – Combustion noise and thermoacoustics (13 abstracts submitted so far)

There will be many other sessions which will be of interest to TANGO members. The programme indicates about 100 sessions will be held.

Workshop at the Deutsches Museum

Maria handed over to Paul to review the 1st Communications and Outreach workshop.

This was held at Deutsches Museum, one of the largest museums of science and technology in the world, on 23rd September 2013. Paul recapped the programme presented covering the basics of communication and hands-on communications tools, designed to help the fellows with the presentation of their work. The workshop programme included a tour of the museum to show how the museum communicates in different ways.

Paul asked if any TANGO members who have photos of the workshop to send them to him to use as a reference for the next workshop.

Paul explained that the exhibition of cosmology is a result of collaboration with the Technical University of Munich, Max Plank institutes and the 'Eso' telescope - and is a good example of what can be done with a lot of money! Although the TANGO budget could not support such an exhibition, Paul suggested that TANGO fellow-

scientists, if they have money to fund communications in their later careers, should consider approaching their local museums or other institutions for collaboration.

Andrea's session in the basics of communications considered the background of how communication is an asset to research and helps the scientists themselves. Feedback through research indicates that the soft skills of communication and outreach activities are an asset to research. But it is not up to the scientist to organise a communication event – there are plenty of other organisations – science weeks, science festivals, as well as museums - who arrange events and they are looking for the expertise that scientists can offer.

PowerPoint skills are important to make a good presentation – little text, lots of pictures and passion!

Rick Scholte had demonstrated the use of his sound camera. Jennifer Millar demonstrated some small scale acoustics experiments and the fellows joined in hands-on activities.

The second Communications workshop will be in the Spring 2016, probably at DM again.

This will focus more on the personal communications skills, also the political reasons for science communication and why there is funding available for this, and introduce poster presentations. So there will be homework for the fellows! At some point the fellows will have to produce posters about their research work, and these will be reviewed for constructive criticism for how to make better posters.

Paul hopes to see everyone there.

Gunilla comments that there is always a difficult balance between information and presentation on posters and asked Paul if he had any material available to assist with this.

Paul has supplied the 1st Comms workshop materials for the website. Over the next few weeks he will put some information together about the basics of posters, how to make it interesting, what information is important, eg contact details. The principles are similar to PowerPoint presentations.

Maria thanked Paul for his contribution.

Conferences and publications (including open-access journals)

Maria resumed her presentation to introduce the topic of 'Conferences and Publications', saying that fellows are encouraged to publish their work; both the partner institutions and the EC want to see this. Maria reminds everyone to acknowledge the TANGO project on all publications, using the text available on the website.

Conferences

Maria highlighted two upcoming conferences that will be of interest to the TANGO project and encouraged fellows to attend and participate.

The EFMC10 in Copenhagen September 2014 has many mini-symposiums which will be informal and does not require the submission of finished, polished work. Matthew Juniper has asked Maria to publicise his informal mini-symposium on thermoacoustics at EFMC about work in progress. Maria asked for a show of hands as to who would be interested in attending this, and at least five people indicated their interest.

The deadline for abstracts for this mini-symposium will be 14th September 2014. Wolfgang comments that the abstract would need to be a good abstract as there is no formal paper submission!

Maria also recommends the next ICSV, which will be in Florence in July 2015. Maria expects to organise a session at this event, similar to the one she will chair in Beijing this year, and probably other TANGO partners will too, so this will be a good opportunity for TANGO partners to present their work and to hear about other activities that are going on in their team.

Maria believes that the following annual ICSV conference will be in Athens in 2016.

Maria asked everyone to let her know any other suggestions for conferences of interest to TANGO members, to be added to the list on the TANGO website. She encourages attendance also as an opportunity for TANGO members to get together and discuss their own research outside of TANGO meetings.

Susann mentioned the European Acoustics Society conference and suggested that maybe it would be good if some people from TANGO could get involved in this, particularly as it is a European conference. Maria commented that the dates would need to be checked as there are so many conferences.

Wolfgang comments that ASME Turbo Expo always has a strong programme on thermoacoustics but remarks on the deadlines for submission of abstracts; for instance for next year's event in Quebec, Canada in June 2015, abstracts are due August 2014, and papers are due October 2014, and revision of papers for resubmission in January 15th.

Paul asks about a list of these conferences, Maria explains that there is a list on the website. Paul suggests that Fenella could send out reminders about submission dates for abstract submissions a week or ten days before the deadline. Maria agreed that is a good idea.

Publications

Maria stresses that it is good to publish, it highlights the project and is good for the project within the EC funding programme. Last meeting there was a question about any obligation to publish in open access journals. Maria has clarified this and no, there is no obligation to publish open access.

Workshops at KTH

Gunilla talked about the agenda and arrangements for the next meeting and workshop to be hosted at KTH.

Project Meeting

The meeting will start at lunchtime on Monday and continue all day on Tuesday.

The meeting in May follows quite soon after the Chennai meeting so there may not be a huge amount to present on new scientific developments, but since the meeting in May is close to ICSV 21 it will be a good opportunity for discussions about that. So for everyone to benefit from this meeting there will also be an opportunity for other inclusions in the programme, such as group discussions.

People should put forward their suggestions.

Housing

Gunilla will send out a list of hotels; everyone needs to book their own.

Gender Workshop

The objective is to raise our awareness of gender issues since gender issues relate to us all – men and women. We also want it to be quite practical, we should get some tools to be proactive and reactive, and to be relevant to TANGO so in an academic setting, not completely general. There will be outside speakers (because we are amateurs in this), professionals leading the day, professional speakers and a gender expert, a skilled person, in charge. This will be on the Wednesday. Detailed plans for this workshop are in progress.

Aero-acoustics in confined flows of low Mach number workshop

On Thursday and Friday the topic will be aeroacoustics, incorporating experimental methods and simulations. Discussions are underway planning lectures, with TANGO project and outside speakers. Lectures are planned to be on Thursday, and on Friday there will be group work, with each group having papers related to one of the lectures to review and discuss in the group, and then present on. The Friday session will end at 3pm.

Mico Hirschberg has confirmed that he will come. He will not speak on experimental methods but he has some other suggestions. Susann is confident that he will make a very interesting presentation.

Other Workshops

The workshop at Keele is the next full meeting after Stockholm, expected to be in late September or October 2014. This will be the mid-point of the meeting, and the EU Project Officer will be attending and reporting on the project, so this is a particularly important event. Participants – fellows and seniors - will be expected to introduce themselves, a bit more extensively than at other meetings, presenting on what they are doing in the project.

In that same week Maria plans for there to be an outreach event – with the Project Officer present. Keele has facilities for outreach events at Home Farm on Keele University campus. Maria asks everyone to think about this outreach event and to put forward suggestions as what to do. What would be fun for the group to do?

Maria hopes to fix the week soon, but can't plan very much yet since she needs to coordinate this with the Project Officer. More details will come later.

Paul asks about the outreach event – who will be the focus group? Will this be a group of people within the university? Maria explains there are different options, for instance 'Grey Matter' - older people who are interested in scientific issues – participate in the events at the outreach centre. Another possibility is a school group - the university also puts on 'family fun days'. So Maria asks for people to put forward their ideas.

Paul points out that people need to know who the focus group is to plan the style of the event. It is very important to know who you are talking to. This needs to be decided early in order to choose what to communicate and how to communicate it.

Work Package 1 Meeting at LMS

Susann spoke about another workshop, this one to be held at LMS in March, for the different research group to get together to get a better picture of what each other are doing and what resources are available.

The topics are orifice aeroacoustics, measurements, theory and simulations; and orifices with grazing flow or through flow

The one-day meeting will involve participants in Work Package 1 to facilitate collaboration and communication with the project. Also it will be a good opportunity to get a good understanding of the different tasks, to understand how research is related. The third aim is to benefit from the different competences within the research groups, both facilities and expertise. The meeting day needs planning so as not to try to do too much, but Susann expects it will be very fruitful.

Wolfgang asks if this will be open to people outside TANGO? One of his other researchers is doing related work. Gunilla replies this will need further discussion – it may good to bring in others or it could be good to contain it to TANGO.

Gunilla explained that this workshop was initiated at the Munich meeting, perhaps Alan Cummings was the inspiration? Maria encouraged others to use this as an example to develop similar collaboration events.

TANGO website

Maria presented an update on website development and new content. 'Online lectures' and 'Scientific animations' are new in the main section and 'Industrialist Presentations' and 'European Commission' are new in the members' area.

Maria is keen to develop 'Online lectures' and 'Scientific animations'. These web-pages are open to the general public. Maria asks anyone to supply content for this if they have it to build up these resources. 'Scientific animations' so far has only Aswathy's cylinder mode animation, but Maria would like people to share any other animations. Maria comments that thermo-acoustics is a topic well suited to animations and Paul points out that animations are good for outreach work.

Some sections of the website are restricted to Fellows and Supervisors. Everyone in TANGO should now have a login to allow access.

The members sections have details on the meetings, agendas and minutes, and presentations from previous workshops. Sujith points out that the workshop presentations from IITM will be made available for the website.

'Project resources' contains the TANGO logo and the publications text. Maria asks if anyone has anything that would be useful for this area then to send it for the website.

The EU report is available in the 'European Commission' page. Various other EU guides are available there. 'Contracts and legal documents' is only visible and available to Supervisors, everything else is also accessible to Fellows.

There is a 'Forum' option on the website but Maria has since learned that there is a Facebook group and asked Alessandra to say a bit more about that.

Alessandra explained the TANGO Facebook group is a closed group so not visible, Jonathan set this up, intended for sharing information and to establish a friendly relationship between TANGO members. It also helps when making arrangements for travel and accommodation for meetings. Jonathan explained this facility had been useful with the arrangements for the trip to India.

Muttalip checked that all the fellows were involved in the Facebook group. Everyone had been invited and was participating so it was agreed that another 'Forum' facility is not necessary. Consequently the Forum page is redundant and will be removed from the website.

Maria explained that the Mission statement and values have been posted on the website, but not a 'Vision' because Maria and Gunilla found it was not possible to formulate a long-term vision as the project will end after four years. Paul asks if there could be a vision for TANGO after the project ends, even if it is not an 'official' project vision, but concluded that it wasn't appropriate.

Table of expertise within TANGO

The table format didn't work so Fenella is working on an Index format, which will be searchable for areas of expertise and to find what expertise people have. Fenella will be in contact with everyone to ask for their input. Once everyone has contributed it there will be a first issue. Changes and updates should be notified to Fenella.

Post meeting note: The Index template has been sent to all TANGO fellows and partners. Please return your contribution to Fenella as soon as possible!

TANGO Charity

Maria is very pleased that the TANGO charity has been a big success. TANGO donations raised Rs60,000 - enough to supply 600 children with a 'school kit'. Maria invited Sujith to explain more about what the children will get.

Sujith has been working with the 'Goldheart' foundation charity, who work in the poor areas of Chennai, and with them formed the idea of a providing a 'school kit'. The most important things were a dictionary and a mathematical instrument kit, along with a few other things, like a note pad and pens. Different ages are being catered for.

Sujith explained that he was arranging a trip to the local school – The T.T.V. HR. Sec. School - on Friday afternoon to meet the older children. The last day's programme was changed to finish at lunchtime to accommodate this trip. Sujith put forward the money last week so that the items could be bought, based on the pledges that people made by email. Aswathy would collect the donation money from everyone to reimburse Sujith.

Any other business

Maria asked for any other business, but nothing was raised, so Maria closed the first day of the meeting.

Presentations by fellows on individual tasks, ordered by themes

On the second day of the meeting, fellows made their individual scientific updates presentations, with questions and discussion afterwards.

Paul gave extensive feedback on all presentations.

The fellows' scientific presentations are not reproduced here but all are available on the TANGO website.

<http://www.scm.keele.ac.uk/Tango/tango-network-fellows-presentations/>

The presentations covered the following scientific areas of TANGO:

Coupling of aeroacoustics and thermoacoustics (tasks 1.2, 1.1), discussion

Orifice acoustics (tasks 1.3, 1.4, 3.2), discussion

Laminar combustor (tasks 2.1, 2.2), discussion

Combustion system with heat exchanger (tasks 3.3, 3.4, 3.5), discussion

Early instability warning (tasks 2.3, 3.1), discussion

Combustor modelling on different scales (tasks 2.4, 3.7), discussion

Other tasks (2.5, 3.6), discussion

TANGO Progress Meeting #2 Notes – Final Issue 13th April 2014