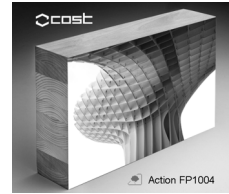


COST Action FP1004

Enhance mechanical properties of timber,
engineered wood products and timber structures



Minutes of the 4th Management Committee Meeting

The Golden Bay Hotel, Larnaca, Cyprus

18 October 2013

Chair: Richard Harris

0. Welcome to participants

A total of 24 participants from the following 18 Parties attended the meeting: Switzerland (CH) Mr. R. Widmann, Mr Robert Jockwer; Cyprus (CY) Mr Michalis Socratous; Czech Republic (CZ) – Dr. L. Melzerova; Germany (DE) – Prof Kay-Uwe Schober; Greece (EL) – Prof G Ntalos, Dr. M. Skarvelis; Spain (ES) Mr Abel Vega Cueto; France (FR) Prof Laurent Bleron, Mr Frédéric Rossi; Ireland (IE) Dr Karol Sikora; Croatia (HR) - Mr. M. Stepinac; Italy (IT) Dr. R. Tomassi; Lithuania (LT) - Dr Antanas Baltrusaitis; Former Yugoslav Republic of Macedonia (MR) – Prof. K. Gramatikov; Norway (NO) – Mr Haris Charalambos (MC Substitute – see email of 19 Sept 2013); Poland (PL) - Dr. S. Krzosek; Portugal (PT) – A. Dias; Sweden (SE) – Prof R Kliger, Prof. R. Crocetti; Slovenia (SI) - Dr Miha Kramar, Dr. M. Sernek; United Kingdom (UK) – Prof R. Harris, Dr Daniel Ridley-Ellis;

Also in attendance:

Dr Martin Greimel, observed the meeting as the FPS Domain Committee Rapporteur.
Ms Sarah Curtis, Grant Holder finance administrator – to make the financial report

With 18 of the 26 (69%) Parties having accepted the MoU to date represented at this meeting the quorum of 2/3 required under the COST rules (specifically COST 4159/10 Annex II Article 8) is attained.

1. Adoption of agenda

The Management Committee agreed to adopt the tabled draft agenda without modification.

2. Minutes of last meeting

Minutes of the previous Management Committee had been circulated by email. The Management Committee agreed to accept the minutes without modification.

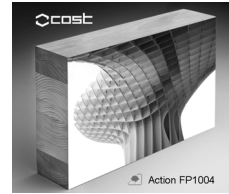
3. Matters arising

There were no matters arising in the minutes of the previous meeting

The Chair reported on discussions, decisions and actions from the Core Group Meeting CGM4, held in Mainz on 6 Sept 2013, all as circulated to the MC Members.

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4. Report from the COST Office

- News from the COST Office

On behalf of the MC, the chair welcomed Dr Martin Greimel who attended the meeting as DC Rapporteur for the COST Action FP1004. Dr Greimel made reported on various items of COST policy, which should be reflected by the activities of the COST Action:

- Website. Dr Greimel noted that the COST Action FP1004 website is updated with details of the activities of the Action
- Cross-over to other Actions.
 - o FP1004 works with FP110 to ensure that the two Actions complement one another through identifying different objectives and working together on joint events
 - o Dr Greimel encouraged FP1004 to contact TU 1207 “Next Generation Design Guidelines for Composites in Construction”
- Near-neighbour countries. These are “Albania, Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Jordan, Lebanon, Libya, Moldova, Montenegro, Morocco, the Palestinian Authority, Russia, Syria, Tunisia and Ukraine.” Dr Griemel reminded the MC that the COST Action should look out for an opportunity to invite a near-neighbour country to join the COST Action.

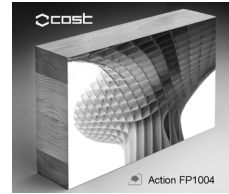
Action: All
- Duties of MC Members
 - o To represent their countries on the COST Action
 - o To disseminate the results of the COST Action

Each member gave a short report on how they were disseminating the work of COST Action FP1004 in their own countries:

- Croatia – Mislav Speginac
 - o Encouraging colleagues to apply for STSM
- Cyprus – Michalis Socratous
 - o Promotes COST Action FP1004 through the conference held on 17 October in Nicosia
- Czech – Lenka Melzerova
 - o Petr Kuklik (DC Member) actively promotes COST Actions to students and others
- France – Frédéric Rossi and Laurent Bleron
 - o Serves on mirror Committee to CEN/TC250 and brings COST Action knowledge to this
 - o Commissioned study/survey to analyse and disseminate information on connections
 - o Published 40 fact sheets showing innovative connections – much information drawn from COST Action FP1004
 - o Tells people about COST Action activity at “Wood Research Network” – meets annually
 - o Adds Cost link to website
- Greece – George Ntalos and Michalis Skarvelis

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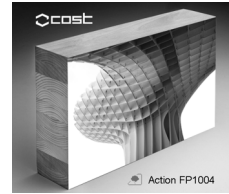
- Every 3 months makes presentation to students
- Disseminates info as scientific advisors in “Hellenic Timber Society”
- Inform all about the COST Action
- Ireland – Karol Sikora
- Website www.irishtimber.org - established link to COST Action website
- Italy – Robert Tomasi
- hosting a training school with national and international delegates
- Lithuania – Antanas Baltrusaitis
- Informs institutions
- Puts links on website
- Former Yugoslav Republic of Macedonia – Kiril Gramatikov
- Acts as MC member on two COST Actions (FP1101 and FP1004)
- Presented to conference at MIT on activities of these COST Actions
- Introduces new ESRs to conferences and STSMs (e.g. post-graduate student in Graz, STSMs to Slovenia and Austria)
- Understands that COST insists on sharing “know-how” and actively follows this requirement
- Poland – Slawomir Krzosek
- Students encouraged to attend COST Action training schools
- Portugal – Alfredo Dias
- After each meeting results of meeting disseminated to contacts
- Spain – Abel Vega
- Dissemination through research groups
- Updates on webpage
- Informs researchers at other universities
- Sweden – Robert Kliger
- Through 20,000 members of “Forest Industries”, discusses with members, including architects
- Slovenia – Miha Kramar and Milan Sernek reported that
- They include links on website
- Deposit proceedings in the library
- Switzerland – Robert Jockwer reported that MC member Bettina Franke actively promotes COST Action FP1004 through:
- Informing contacts of meetings
- Publishing in Network Journal
- Disseminates work of both FP1101 and FP1004
- UK – Daniel Ridley Ellis
- SIRT Network. Advises the panel of “*The Strategic Integrated Research in Timber*” on the activities of COST Action FP1004
- Richard Harris
- Feature Article for Summer 2013 edition of Wood Focus magazine. (see attached)

In future meetings, MC members will be asked to report on how they have worked to disseminate the activities of the COST Action.

Action: All

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- Status of Action, including participating countries

Membership of COST Action FP1004 is now 26 COST Action Countries and 3 non-COST countries.

5. Verbal progress reports of working groups

WG1: Glued rods and screws for reinforcing weak zones and connections in timber

WG2: Influence of connections on whole structure response in timber structures

WG3: modelling of basic wood behaviour and of connections with glued in rods and self-tapping screws.

The COST Action has used these Work Group headings as guidance to ensure that it delivers the requirements of the MoU but they have not been active in arranging activities.

Under the topics of WG1 and WG2, as agreed at Management Committee meeting MC3, a CLT Conference was held at TU Graz, hosted by Prof Gerhard Schickhofer, from 21-22 May 2013. There were 12 invited speakers and their papers were published in a State-of-the-art publication that formed the proceedings. There were 190 delegates, of whom 57 were reimbursed by FP1004.

Under the topic of WG1, the initiative to follow up on the Wroclaw bonded-rod seminar (18 October 2012) has led to a WG1 sub-group being formed to review design rules for bonded rods and to

Mislav Stepinac updated the meeting on the work of the sub-group and the paper he presented to CIB/W18 in Vancouver.

6. Financial Report

6.1 Budget Status

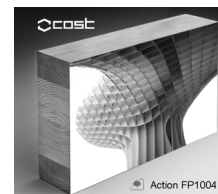
The Scientific Budget for the year 2012-13 was €135,826, which was underspent by €28,617. The underspend cannot be carried over. The scientific budget approved by the COST Office for 2014-15 is €145,217. The increase is due to the increased number participating countries.

Underspend is largely due to invited delegates not attending meetings. For example 50 were invited to the Nicosia Conference but only 29 attended. There was discussion about how to improve participation. It was suggested that:

- Invitations should not be sent in August. Unfortunately, for a September meeting invitations must be sent in August. E-COST takes time to activate for the new year of the COST Action and invitations can only be sent via ECOST

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- Send invitations more than 2 months in advance. Although as much notice as possible is always given, the COST Action has a number of meetings and the lead-in does not normally allow this

6.2 Action Budget Planning and allocation. 1 July 2013- 30 June 2014

The Budget submitted to the COST Office for Grant period: 1 July 2013 – 30 June 2014. Allocated budget: €167,000

A. SUMMARY BUDGET

(1) MEETINGS	€ 103,700
(2) SHORT-TERM SCIENTIFIC MISSIONS	€ 12,000
(3) TRAINING SCHOOLS	€ 24,000
(4) PUBLICATIONS, DISSEMINATION, OUTREACH	€ 5,571
(5) OTHERS € 0	

B. TOTAL SCIENCE EXPENDITURE (sum of (1) to (5)) **€ 145,217**

C. Financial & Scientific Administration and Coordination
(max. of 15% of B.)

€ 21,783

D. TOTAL EXPENDITURE (B+C)

€ 167,000

The breakdown of the forthcoming activities was presented:

(1) MEETINGS

Management Committee Meetings

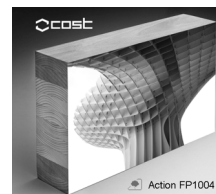
Location: To be agreed
Date: November 2013
Number of participants to be reimbursed: 50
Travel costs: €40,000
Organisational support: €2,500

Working Group Meetings

WG no. WG1 – Development meeting
Location: To be confirmed
Date: November 2013
Number of participants to be reimbursed: 8
Travel costs: €6,400
Organisational support: 0

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Other Meetings

Core group meeting 3

Location: Bath

Date: January 2014

Number of participants to be reimbursed: 8

Travel costs: €6,400

Organisational support: 0

Core group meeting 4

Location: To be confirmed

Date: June 2014

Number of participants to be reimbursed: 6

Travel costs: €4,800

Organisational support: 0

Title: Experimental research

Location: Prague - ESR conference

Date: April 2014

Number of participants to be reimbursed: 52

Travel costs: €41,600

Organisational support: €2,000

(2) SHORT TERM SCIENTIFIC MISSIONS (STSMs)

Number: 7

Cost: €12,000

(3) TRAINING SCHOOLS

Location: Trento. CLT training

Date: December 2013

Number of Trainees to be reimbursed: 26

Trainees Grants: €18,000 (= 30 x €600)

Number of Trainers to be reimbursed: 5

Travel costs: €4000 (= 5 x €800)

Organisational support: €2,000

(4) PUBLICATIONS, DISSEMINATION, OUTREACH, WEBSITE

Title: To be confirmed

Cost: €4517

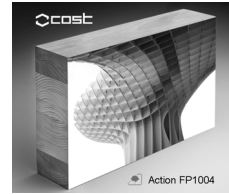
Title: website maintenance

Cost: €1000

The MC unanimously accepted this budget and breakdown of activities.

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7.0 Action Planning (including meetings)

7.1 Roadmap for COST Action FP1004

The timeline for the completion of the COST Action FP1004 was presented in a “Road Map”, which is attached to these minutes.

7.2 Location and date of next meeting

Title: Experimental research

Location: Prague - ESR conference

Date: April 2014

Number of participants to be reimbursed: 70 (approx.) – preference to ESRs

7.3 Long-term planning (including anticipated locations and dates of future meetings)

The next WG and MC meeting would be in Autumn 2014. It is proposed to have a joint meeting with COST Action FP1101 on the topic of bridges. There would be an MC meeting followed by a conference, hosted by the University of Biel

The final meeting will be in Spring 2015 and the venue would be decided from offers of hosting made to the Core Group. At present there were offers from Bordeaux and Portugal

7. STSM status, applications

STSM manager Kay-Uwe Schober reported that 7 STSMs were successful completed in 2012-13. Two grants had been made through reciprocal STSMs to New Zealand, which were paid from the COST Office central funds. There had been two applications for STSM Grants in the year 2012-13. The target is 6 per year.

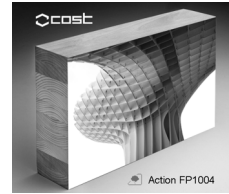
Supervisors of research should promote STSMs to there students. Note that STSMs are not only for ESRs.

Members are encouraged to contact Kay-Uwe as soon as possible if they wish to submit a proposal. The STSMs should be complete by May in order for the finances to be processed in time for the end of this COST Action year.

Robert Jockwar gave an interesting presentation on his STSM experience

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8. Publications, dissemination and outreach activities

This proceedings of the Graz Conference and the Nicosia Conference were successfully published as proposed at meeting MC3. The publications carry an ISBN and are available in both hard copy and e-publishing format.

9. Training School

There will be a training school on the topic of CLT, hosted by Roberto Tomasi in Trento. There will be 30 grants for COST Action FP1004 members and these will be distributed to maximise participation amongst all the member countries. This will be held in April 2014 – MC members to look out for notice of the event and encourage ESRs to apply.

10. Publications, dissemination and outreach activities

11. Promotion of gender balance and of Early Stage Researchers (ESR)

Once again, Richard Harris observed that while the gender balance of the meeting was far from equal. The COST Action had enabled excellent ESR Participation and the training school would further this.

12. Non-COST country participations

University of British Columbia (Canada) and University of Technology (Sydney) were already in this COST Action and the University of Canterbury (New Zealand) were members of the COST Action.

13. Web news

The COST Action website at <http://costfp1004.holz.wzw.tum.de> is being kept up-to-date by Frank Hunger.

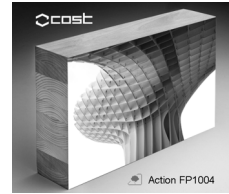
There is a LinkedIn group formed for the COST Action:
www.linkedin.com/groups?gid=4170149

14. AOB

No other business to report

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COST Action FP1004: Roadmap to completion:

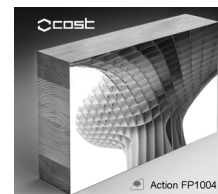
	Year 1: 2011-2012				Year 2: 2012-2013				Year 3: 2013-14				Year 4: 2014-15			
	July	Oct	Jan	April	July	Oct	Jan	April	July	Oct	Jan	April	July	Oct	Jan	April



MC1 Brussels		MC2 Brussels				MC3 Wroclaw				MC4 Larnaca				MC5		Final
		CG1 Lund		CG2 Edinburg			CG3 Munich		CG4 Mainz							
		WGs1,2,3 Brussels		ESR Zagreb		WG1 BIROD		CLT Graz		WGs1,2,3 Nicosia		ESR Prague		Brigees		Final Confer
						TS1 Lund										

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Text of Article in Wood Focus:

Footing the COST - framework for timber R&D

By Melanie Rutherford



Melanie Rutherford speaks to Professor Richard Harris from the University of Bath, UK, about how an intergovernmental framework is strengthening R&D in the timber industry.

Scientific breakthroughs don't grow on trees. Behind every new discovery lies a team of scientists and crucial funding, without which some of today's most important scientific innovations may never have evolved. Such is true for the timber industry. At a time when sustainability and environmental issues such as climate change dominate how the sector operates, R&D has never been more important.

For many years, a part of call for research institutes and wood scientists has been the European Cooperation in Science and Technology (COST), an intergovernmental framework facilitating nationally funded research across Europe and bridging the scientific communities in emerging countries. Professor Richard Harris of the University of Bath, UK, chairs a timber-focused COST project and explains, 'There are no funds for research activities, so COST functions by enabling researchers to come together to share knowledge and skills, which is formalised through the publication of reports and proceedings'.

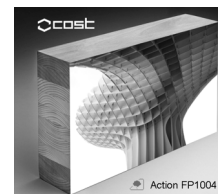
COST comprises a series of actions covering nine key domains. 'Actions exist in many areas of science and for wood-based industries, the domain of Forests, their Products and Services (FPS) is the usual source of funding,' says Harris. Around eight new actions are approved in the FPS domain each year, in addition to trans-domain proposals (TDPs) aimed at broader, multidisciplinary research projects covering two or more of the nine scientific areas.

The broad scope of COST's FPS activities encompass:

- **Forestry science** – addresses economic, environmental and social needs in a sustainable way. It also encourages scientific debate on the sustainable provision of forest products and services, including wood and wood products, water and soil protection, climate regulation, bioenergy, rural development, recreation and public health, habitats for wildlife, landscape diversity, carbon sinks and reservoirs.
- **Forests and environment science** – focuses on protecting forests from pollution, abiotic and biotic hazards (including fires, storms, pests and diseases) by providing timely, reliable and accurate information on forests and their ecosystems, in the wider context of mitigating and adapting to climate change.
- **Wood technology science** – increases knowledge necessary to broaden wood's use as a sustainable, efficient and renewable resource in existing and new applications. The FPS domain supports research

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that focuses on improving the properties and performance of timber to enhance its competitiveness against other materials.

- **Pulp and paper science** – furthers knowledge of the physical, chemical and biological characteristics of pulps and its products. High on the FPS domain’s agenda is optimising the use of resources and improving sustainability and competitiveness, especially in new applications, while it also supports research into energyefficient manufacturing processes.

- **Bioenergy from forests research** – improves understanding of the use of forest-derived biomass to meet current and future energy needs, while maintaining the forest’s ability to fulfil other important roles (such as mitigating climate change).

- **Biorefinery research** – develops the potential of the forest-based sector to produce high-value, innovative products for changing markets and customer demands. In addition, the FPS domain considers ideas and interdisciplinary initiatives that address issues at crosssector level, such as sustainability assessment, lifecycle analysis, tourism, energy and recycling.

How to apply COST funds research projects throughout Europe over a period of four years, proposals for which can be submitted via one of two routes. While a continuous open call invites proposals for new actions across the nine domains, interdisciplinary proposals that span more than one of these areas fall under the umbrella of TDPs.

Open call submissions follow a two-stage process. Following registration, proposers submit a preliminary proposal summarising the goal and expected impact of the proposed action by a set collection date – normally the last Friday in March or September (the next deadline is 27 September 2013, at 1700 GMT+1). Harris advises applicants to ‘ensure that proposals are written in a format understandable to assessors from outside their field’. After each preliminary proposal has been evaluated, around 12 from each domain are invited to submit a full proposal, each of which is externally assessed by a panel of experts in that particular field. The best are then selected for presentation to the domain committee, with those considered to be of sufficient benefit and significance making the shortlist for approval. ‘The application process takes around six months for the initial idea, followed by a further six months if invited to make a full application,’ says Harris.

TDPs follow a separate, slightly simplified version of the open call procedure, with applicants required to register before submitting a single proposal, which is evaluated over two stages. Again, successful proposers present their case at a TDP panel hearing before a final decision is made. The next TDP registration deadline falls on 27 September 2013, with proposals needing to be submitted by 8 November 2013 (both 1700 GMT+1).

To avoid duplication of past or current funded research, it’s worth looking at the scope of current FPS actions prior to submitting a new proposal. A full list of past and running projects can be found at [www.cost.eu/domains_actions/fps/actions/\(all\)](http://www.cost.eu/domains_actions/fps/actions/(all)). These span everything from innovative applications of regenerated wood cellulose fibres to strategies for sustainable management of *Fraxinus dieback* in Europe, and the development of renewable fibre and bio-based materials for new packaging applications.

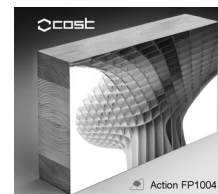
In focus: COST Action FP1004

Harris is Chair of COST Action FP1004 – Enhance mechanical properties of timber, engineered wood products and timber structures. Recognising the increasing importance of timber and wood-based engineered products as sustainable structural materials, COST approved the proposal as an FPS action in 2011.

FP1004 addresses the need to improve the properties of structural wooden products to make them competitive, reliable and low-carbon materials for use in the construction of affordable buildings. ‘The scientific activities focus on increasing and consolidating current knowledge of structural behaviour of timber and connections in weak zones, and how to enhance performance and reliability,’ says Harris. Meeting these objectives calls for a scientific and engineering approach as well as coordination, to bring together what are already large-scale research domains in Europe.

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FP1004 promises to deliver ‘increased knowledge on improving strengthening, stiffening and toughening techniques, modelling enhanced performance and experience in real projects, to create new opportunities for timber construction’. These intentions were formalised in a Memorandum of Understanding (MoU), says Harris, before work groups were formed at the start of the project. Although there is much interaction between the work groups, the topics help focus the activities in the three areas – namely: 1. Enhance the performance of connections and structural timber in weak zones. 2. Enhance the mechanical properties of heavy timber structures, with particular emphasis on timber bridges. 3. Modelling the mechanical performance of enhanced wood-based systems.

‘The work of the action is conducted through meetings, and there is also funding for short-term scientific missions (STSMs) to enable researchers to spend short periods of time working in another institution,’ says Harris. ‘Training schools, primarily aimed at PhD students, enable the experts working on the action to spread their knowledge to the next generation.’ This, he says, will serve to identify knowledge gaps in the field and inform future work and collaboration between research teams.

While Harris admits, ‘Clearly, the task of addressing these issues without actual funding is formidable, there is great goodwill towards achieving a successful outcome and FP1004 has already published two sets of conference proceedings’. The first, which followed a meeting in Zagreb, Croatia, focused on early-stage research in the fields covered by the work groups. ‘The second set of proceedings, from a meeting in May 2013 in Graz, Austria, provided a state-of-the-art set of papers on cross-laminated timber,’ says Harris, ‘and another in October 2013 in Wrocław, Poland, is providing the impetus towards creating design rules for boded rods in the next version of Eurocode’.

However, he warns, ‘It is hard, unpaid work for the participants, which is remarkable in a world where accounting for everything is the norm. Applicants should only make a proposal if they are prepared to put in a huge amount of work for no financial reward.’ But that’s not to say there is no reward at all. While Harris admits there is still a long way to go in the four-year project, which is currently at its halfway point, ‘it has already made a positive impact, and research networks continue to be created and developed’.

With thanks to Melae Langbein, Science Officer at COST FPS, for assisting with this feature.

Further information

For further information on COST FPS and how to apply, email melae.langbein@cost.eu

Wood Focus Magazine, 13 Aug 2013