



Meeting of the Management Committee & Working Groups of COST Action TU1205  
**“Building Integration of Solar Thermal Systems (BISTS)”**

**Third Meeting: 27-28 March 2014, Ajaccio, Corsica, France**

**Place:**       **Radisson hotel**  
 Agosta plage 20166 Porticcio  
 Ajaccio, Corsica, France  
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**Participants**

Number	Name	Country	27/4/2014	28/4/2014
1	Almeida Manuella	Portugal	✓	✓
2	Borg Simon Paul	Malta	✓	✓
3	Braganca Luis	Portugal	✓	✓
4	Buhagarian Vincent	Malta	✓	✓
5	Chemisana Daniel	Spain	✓	✓
6	Chwieduk Dorota	Poland	✓	✓
7	Cristofari Christian	France	✓	✓
8	Kalogirou Soteris	Cyprus	✓	✓
9	Kennedy David	Ireland	✓	✓
10	Kilik Muhsin	Turkey	✓	✓
11	Krstic Furundzic Aleksandra	Serbia	✓	✓
12	Norvaisiene Rosita	Lithuania	✓	✓
13	Leindecker Gerald	Austria	✓	✓
14	Notton Gilles	France	✓	✓
15	Ochoa Carlos	Israel	✓	✓
16	Palombo Adolfo	Itali	✓	✓
17	Smyth Mervyn	UK	✓	✓
18	Tripanagnostopoulos Yiannis	Greece	✓	✓
19	Wansdronk Rene	Netherland	✓	✓
20	Aeleni Laura	Portugal	✓	✓
21	Blagojebic Mirko	Serbia	✓	✓
22	Bonnet Jean	France		✓
23	Cappel Christoph	Germany	✓	✓
24	Christofi Constantinos	Cyprus	✓	✓
25	Florides Georgios	Cyprus	✓	✓
26	Keys Donal	Ireland	✓	✓

27	Kramer Korbinian	Germany	✓	✓
28	Lamnatou Chrysovalanto	Spain	✓	✓
29	Lopez Lorenzo Jose	Spain	✓	✓
30	Monteiro Da Silva Sandra	Portugal	✓	✓
31	Tsioutis Charalambos	Cyprus	✓	✓
32	Zacharopoulos Aggelos	UK	✓	✓

**Day 1: 27<sup>th</sup> March 2014**

**Management Committee meeting**

(All invited but only MC Members have voting right)

**9:00 to 10:30**

1. Welcome to participants

Prof. Kalogirou welcome the participants and introduced the representative of the Rector of the University of Corsica Prof. Chr. Cristofari who addressed the participants wishing success to the meeting and gave details of the University of Corsica.

2. The agenda of the meeting, circulated by email to all members, was adopted.

3. Minutes of second meeting (Limassol, December 2013)

The minutes of the second meeting in Limassol were approved without any modification.

4. Short presentation of new participants.

Prof. Kalogirou introduced two new members participating in the meeting. These are:

1. Prof. Ing. Adolfo Palombo of the University of Napoli, Italy

and

2. Dr. Leindecker Gerald Institute fur Analytische Struckturentwicklungsplanung, Austria.

5. Report from the COST Office

Thierry Goger, Science officer resigned (Dec. 2013) .The new Science Officer for Transport and Urban Development (TUD) domain at the COST office is **Dr. Mickael Pero**.

From June 28, a new version of COST Vademecum is applied.

The Annual Progress Conference will be held in Paris from 10 to 11 April 2014 and only the Action Chair will participate to present the progress of the Action.

6. Status of Action, including participating countries:

There are 20 COST countries participating with 30 MC members and 10 substitute members. From now on new countries participation will need MC decision. There are also two non-COST countries participating:

USA (James Russell-Appalachian State University)

Canada (Andreas Athienites-Concordia University)

7. Budget status:

The First year budget was 129,000 Eur (1<sup>st</sup> instalment received is 83,850 Eur – 65%). It is expected to receive another 5,000 Eur based on the 20 countries participation instead of 19 that were at the start of the program.

The expenditure was:

Total for meetings 97,090 Eur.

Training schools (first year) = 0 Eur

STSM (first year) = 10,800 Eur (6 participants).

8. Critical managerial issues

Prof. Kalogirou asked for more attention to be paid on emails concerning deadlines and gave emphasis on managerial issues concerning payments and signed OTRR forms.

Any missing documents (tickets) should be scanned and sent to Mr. Tsioutis at:

[Charalambos.tsioutis@cut.ac.cy](mailto:Charalambos.tsioutis@cut.ac.cy) the soonest possible.

9. Reimbursement procedures

All payments will be carried out simultaneously and all participants must handle-in their forms and missing items the soonest.

10. New Documents

Prof. Kalogirou asked participants who have not declared their expertise and infrastructure to do so. Also the participants must declare any projects submitted/organised based on the Action, new PhDs, new local funded research, new FP7 or H2020 proposals, etc. These are very important to be recorded for the progress of the Action.

11. Progress report of working groups

Prof. Kalogirou gave an account of the expected deliverables for month 12, according to MoU. Answering a relevant question, Louis explained that the timing of presenting the deliverables to the HO is very important for the final ones. For the intermediate deliverables the timing can be elastic provided that there is a good excuse and improved work is going to be presented. The deliverables are sent to the HO in an email with copies to Louis.

12. STSM status, planning of activities.

Short term Scientific Missions (STSM) are of a duration of 5 days to 3 months (max. 6 months for ESR). Their overall cost is a max. of 2500 EUR for STSM up to 3 months and a max of 3500 EUR for over 3 months (ESR). The calculation is based on a daily allowance of 60-90 EUR and a travel cost of 300 EUR. For the first year, 6 STSM were

planned with a total budget of 10,800 EUR (1800/stsm) and the scope of being used almost exclusively to prepare Action deliverables.

Until now four applications were approved and Gilles, the STSM Manager, gave an account and presented details. New applications must be submitted to the STSM manager and the application will proceed through the e-cost system for approval.

#### 13. Publications, dissemination and outreach activities

The First publications are due month 12 (April). On every template and document the **Action Logo should be** used. Templates are available on the website.

#### 14. Web news

The COST official web page is at:

[http://http://www.cost.eu/domains\\_actions/tud/Actions/TU1205](http://http://www.cost.eu/domains_actions/tud/Actions/TU1205)

The Action web page is at:

Web site: <http://www.tu1205-bists.eu/>

Password: cost1234!

Any documents for the page should be sent to Mr. Costas Christofi. Email:

[c.christofi@cut.ac.cy](mailto:c.christofi@cut.ac.cy)

#### 15. AOB

Closing his presentation Prof. Kalogirou gave details of the program and activities to follow.

He also mentioned that he was appointed as Editor-in-Chief of the Renewable Energy Journal and he is in need of good reviewers on main areas of RENE. He asked the participants to apply for the position and suggest suitable names to include in the list.

### 11:00 to 12:00 Special Presentation

Korbinian Kramer of the Fraunhofer-ISE, presented to all participants the subject of Performance Evaluation of Solar Collectors. He gave a detailed explanation on the collector standards and their requirements. He also explained the changes that are needed to be done on these standards and when they are expected.

### 12:00 to 13:00. Presentation of Case Studies Received and Discussion

Mervyn mentioned that until now 64 case studies were submitted. From these, 47 were allocated a reference number and were reviewed. 39 of the 47 cases are of direct relevance to the action. The case studies were analysed according to set criteria and a template was used to extract a significant amount of data.

17 of the cases refer to air heating, 25 to water heating, 4 to combi systems. 13 are dealing with cooling and ventilation, 6 to BIPV/T and 13 to linked-auxiliary systems.

He then proceeded to review and present the various systems in respect to: stage of development, placement, insulation, architectural integration, economics, embodied energy, sustainable materials environmental impact, legislation and finally performance.

## **14:00 to 16:00 Working Groups (1-3) Parallel Sessions**

These are presented subsequently, separately.

## **16:30 to 17:30 Working Group 4: Taxonomy and Dissemination Activities (all)**

1. Presentation of Taxonomy of systems. David presented the output of a work dealing with the Taxonomy of systems. The work is in interactive computer form presenting examples and giving details for every case.
2. Website. Soteris presented the Action web page.
3. Planning of first deliverables Soteris+David mentioned that by the end of April the working groups must have their deliverables ready. They are:  
**WG1-** A review paper which has 8 key headings and will be about 40-45 pages  
**WG2-** A review paper on Modeling and Simulation. It is expected that the paper will appear on the website at the beginning of April.  
**WG3-** A review paper  
More case studies must be found and uploaded to the webpage.  
Vincent referred to the memorandum of understanding and it was affirmed that the targets are met.

## **Day 2: 28<sup>th</sup> March 2014**

### **8:30– 9:30 Working Groups (1-3) Parallel Sessions**

#### **Planning of work to be done - Deliverables**

These are presented subsequently, separately.

### **9:30 to 10:30 Group Session (All WGs)**

Group discussion on status of WG plan for deliverables and inter workgroup deliverables  
Progress/planning report of working groups by WG Leaders.

- WG1 leader presentation by Mervyn
- WG2 leader presentation by Daniel
- WG3 leader presentation by Aggelos
- WG4 leader presentation by David

Detailed minutes of the meeting of every WG are presented at the end of this document.

### **11:00 to 12:00 Management Committee meeting**

(All invited but only MC Members have voting right)

1. Planning of first Training School (2014)  
Soteris presented the plan for the second year. Two meetings, about every 6-months will take place. The 4<sup>th</sup> meeting will be combined with the first training school (TS).  
The training school and meeting will be held at Freiburg, Germany, at the Fraunhofer-Institut für Solare Energiesysteme ISE between 1-5/9/2014 (1-3/9 Training School, 4-5/9 meeting).

The duration of the TS is three days (Mon-Wed). The meeting will follow at the same place in order to reduce travelling costs as speakers will be present and give the opportunity to trainees to participate in the meeting. All members should advertise the training school to their students to have a good participation (1-2 per country). A leaflet will be prepared and circulated to all. Trainer's expenses will be covered in a similar way as in meetings. Trainee's expenses will be covered with a fixed amount to be decided in collaboration with Werner.

**TS Time table:** It was fixed as follows:

- Morning session
  - 9.00-13.00 (two sessions [1, 2] 1.45 min each)
  - Coffee break 10.45-11.15
- Lunch break (13.00-14.00)
- Afternoon session
  - 14.00-17.00 (two sessions [3, 4] 1.15 min each)
  - Coffee break 15.15-15.45

The **Training School-syllabus** will be:

**Day 1:**

- Session 1,1:
  - Introduction to TU1205-BISTS (Soteris Kalogirou) - 10 min + 15 min intro into ISE (Werner Platzer)
  - Basic solar geometry (Soteris Kalogirou) – 35 min
  - Thermal analysis of solar collectors (Soteris Kalogirou) – 45 min
- Session 1,2:
  - BISTS case studies (Mervyn Smyth) – 105 min
- Session 1,3:
  - Modelling of solar systems with TRNSYS (Daniel Chemisana) – 75 min
- Session 1,4:
  - Modelling of buildings and solar systems with Energy+ (Milorad Bojic) – 75 min

**Day 2:**

- Session 2,1
  - Thermal testing of solar collectors and systems (Korbinian Kramer) – 45 min
  - BISTS testing under a solar simulator (Aggelos Zacharopoulos/Mervyn Smyth) – 60 min
- Session 2,2
  - Certification of building products (Werner Platzer) - 45 min
  - Architectural aspects of BISTS (Aleksandra Krstic) – 60 min
- Session 2,3
  - Optical modelling of BISTS (Aggelos Zacharopoulos) - 75 min
- Session 2,4
  - Hybrid PV/T systems (Yiannis Tripanagnostopoulos) – 75 min

**Day 3**

- Session 3,1
  - OpenStudio and GenOpt programs (Alberto Coronas) – 40 min
  - Design Building and SimaPro programs (Ricardo Mateus) - 40 min
  - Energy Storage (Luisa Cabeza) - 25 min
- Session 3,2
  - Air heating systems (Korbinian Kramer) – 35 min

- Space Heating and Cooling systems (George Florides) – 35 min
    - Combi-systems (DHW+heating+storage) (Dorota Chwieduk) – 35 min
  - Session 3,3
    - Visit to ISE laboratories
  - Session 3,4
    - Visit to ISE laboratories
2. STSM's 2014 (Soteris+Gilles)  
Two more STSMs must take place before the end of May. Members should declare the students names to Gilles as soon as possible.
  3. Publications, dissemination and outreach activities (Soteris)  
Participants in the WREC conference in August, London UK, who will present topics on BISTS can declare it to Soteris in order to organise a WREC section on BISTS. Soteris Kalogirou will investigate if part of the registration fee may be covered by the COST budget.
  4. AOB  
Soteris thank the organisers Christian Cristofari and Gilles Notton for their excellent organisation of the meeting.

#### **12:00 – 13:00: A presentation**

**Jean Paul Bonnet** of the PCN Energy, presented the subject of the objectives, calls and prospects of Horizon 2020 program.

He referred to the current EU policy and achievements of its programs and he gave details of the Horizon 2020, covering topics, Budgeted allocation, Main challenges on Energy, scope etc.

**15.00-17.30 Visit to Corsica University Laboratories** where, after an introduction, a tour took place to the various project sites and details of the projects were given. Then followed a discussion with Government officials on Energy in Buildings: ADEME (Agency of Environment and Energy Management), Ajaccio Municipality, CAUE (Council for Architecture, Town planning and the Environment).

## ***Minutes of Working Groups***

### **The Agenda for all WGs was:**

Welcome to participants

Adoption of the agenda

Objectives and working program

Distribution of tasks

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

Time-table of work

### **Working Group-1**

#### **Participants**

Luis Braganca ( <i>DC Rapporteur</i> )	LB
Soteris Kalogirou	SK
Mervyn Smyth	MS
Georgios Florides	GF
Yiannis Tripanagnostopoulos	YT
Laura Alenei	LA
Chrysovalantous Lamnatou	CL
Christian Cristofari	CC
Gilles Norton	GN
Manuela Almeida	MA
Dorota Chimeoluk	DC
Rosita Norvaisiere	RN
Vincent Buhagiar	VB
David Kennedy	DaK
Aleksandra Krstic Furunzic	AKF
Palombo Adolpho	PA
Donal Keys	DK
Kramer Korbinian	KK

#### **Absent**

Platzer Werner ( <i>WG Leader</i> )	WP
Jose Santos Lopez	JSL
Alexander Georgiev	AG
Rumen Popor	RP
Ivan Miletic	IM
Costantinos Vassiliades	CV
Andreas Savvides	AS

#### **Apologies**

None noted



## 1. Welcome to participants

Mervyn welcomed the participants to working group 1, presented the agenda as laid out by the COST office with adoption by all WG1 participants and introduced the scope of work and objectives for the work group.

The group again discussed the structure of the review paper and the allocation of work to individuals. The final topics to be included in the review and the persons responsible for every part are as follows:

### Title: State of the art on Building Integrated Solar Thermal Systems

1. Introduction: (definition, scope, main aim) [SK] **1 -2 pages**
2. Classification and Taxonomy (Table, description of what is in table, taxonomy table (elements + technology + general examples) (definition of active, passive, hybrid, concentration, other, ) Collector building element (façade, roof, other) [MS+DK] **4 pages**
3. Building integration applications [LA, YT, DC, WP, MS, Tim O'Leary(TOL)] **10-15 pages**
  - o air heating (TOL)
  - o water heating (WP)
  - o air/water-system (YT)
  - o cooling/ventilation (ventilation (mech, natural, hybrid)(vent mode (supply, exhaust, buffer) (DC)
  - o electricity/thermal (BIPV/T) (LA)
  - o linked (auxiliary system) (MS)

(Type to be included..... active, passive, hybrid, concentration, other)  
 Services integration (direct supply, indirect supply, thermal storage, automated control, grid interaction)  
 BISTS Construction (material description, customized design, prefabrication, self-contained)

4. Architecture [AKF, VB, Donal Keys(DOK)] **10-15 pages**

Architectural context (urban, rural, suburban), climate, building shape and orientation (VB)  
 Architectural integration (aesthetics constraints, visible collector profile, architectural empathy, surface colour/texture) (AKF)  
 Construction ((Building use (residential, commercial, tertiary, industrial, other) (new build, rehabilitation) material description, pre-fabricated units, customised design, double envelope structure (DOK)
5. Building physics [YT, GF, VB, LA, RosN, AP] **10 pages**

Day lighting, (VB)  
 thermal insulation, (RosN, VB)  
 integral thermal storage (LA, AP),  
 weather proofing, (GF)

acoustics, (GF)  
shading (VB)

6. Environmental/sustainability (durability, embodied energy, sustainable materials, environmental impact, health and fire safety) [CC, DanC, MA] **1-2 pages**
7. Standardisation, Testing and performance evaluation [KK, VasD?, SK] **4 pages**
8. CONCLUSION and PERSPECTIVES/RECOMMENDATIONS [ALL] **1 page**

**Harmonisation** [DK, BN]

***Name abbreviations***

SK Soteris Kalogirou  
MS Mervyn Smyth  
LA Laura Aelenei  
YT Yiannis Tripanagnostopoulos  
GF George Florides  
RosN Rosita Norvaisiene  
VB Vincent Buhagiar  
MA Manuela Aleida  
DoK Donal Keys  
AKF Aleksandra Krstic Furundic  
CC Chrysa Lamnatou  
DanC Daniel Chemisana  
VasD Vassiliki Drosou  
DC Dorota Chwieduk  
DK David Kennedy  
WP Werner Platzer  
TOL Tim O'Leary  
KK Korbinian Kramer  
BN Brian Norton  
AP Adolfo Palombo

**Time-table of work**

The review paper will be about 40 PAGES, double space, inc figures, ref, etc. By the 18th April 2014 (Fri.) everybody will submit his contribution to the section coordinator. By 28/4/2014 the various sections will be submitted to DK for harmonisation.

SK highlighted the importance of copyright issues and asked that permission for using copyrighted figures should be acquired.

A discussion followed on how the names of the authors should appear on the paper. A suggestion by Mervyn was that only the name of the Cost coordinator should appear on the front of the paper and there could be an acknowledgement of all contributors at the end. Alexandra suggested that all authors' names should appear on the front. The decision reached is that the final decision on this matter will be taken in the next meeting.

The final paper will be sent to every member of WG1 for any comments before it is delivered.

### **Promotion of gender balance and of Early Stage Researchers (ESR)**

Not discussed at this meeting due to time restrictions.

### **AOB**

Nothing noted

## **Working Group-2**

### **Participants**

Christoph Cappel (Germany)  
Muhsin Kilic (Turkey)  
Mirko Blagojebic (Serbia).  
Adolfo Palombo (Italy).  
Kostas Christofi (Cyprus)  
Daniel Chemisana (Spain)

### **1 Welcome to participants**

Daniel welcomed the participants, especially Mirko Blagojebic and to Adolfo Palombo, both joining the WG2 for the first time. Mirko explained that he will joint Danijela and Milorad in WG2 from now on and Adolfo did a brief presentation of research lines related to WG2 from U. Naples as the institution came on board recently.

### **2 Objectives, deliverables and working programme**

The sequence of tasks conducted from the meeting in Cyprus was explained to all as well as the work produced from them. The list of items covered is:

- The structure of the deliverable and the next steps for preparing the pre-final drafts. **Done**
- First week of January to collect references additional to the draft review. The references to be framed with the Title, Authors, Year, City, Country, Conference, Date. (Daniel). **Done.**
- .
- Jayanta, Daniel and Chryssa to organise the information and to sum up the context and the outcomes. **Done.**
- Create a dynamic list in a dropbox folder. Daniel to create and invite. **Done.**
- Contents of tables for deliverable 1. **Done.**

Regarding the deliverables:

- *D 2.1. Review of current STS modelling techniques. This review will also be submitted as a joint partner publication in a peer reviewed journal (Month 12).*

The draft manuscript of the deliverable 1 was presented and discussed, as planned in the previous meeting minutes.

- *D.2.2. Annual STSM for PhD students and Early Stage Researchers on theoretical modelling and numerical simulation of thermal behaviour of BISTS (Month 6, 18, 30, 42)*

From mid March to mid of April, Chrysa Lamnatou from the University of Lleida is doing a STSM in the University of Corsica in order to advance and ultimate a second review focused on the LCA analysis of BIST systems.

- *D.2.3. Annual Training School for dissemination of expertise to PhD students and Early Stage Researchers (Month 18, 30, 42). This will include topics on theoretical modelling and numerical simulation of thermal behaviour of BISTS.*

There were discussed the possibilities for the next training school and for the other two planned. Milorad, Ricardo, Alberto and Daniel explained that they have specific courses on Energy+, Trnsys, OpenStudio, GenOpt, DesignBuildir and SimaPro. The link of the courses will be sent to all the members from COST.

In the next deliverables the next changes with respect to the people in charge was decided:

- D 2.4. Report on the validation of developed codes, both thermal and optical (Month 30). Danijela and Christoph Cappel will join Manolis Souliotis and Lacour Ayompe.
- D 2.5. Report on the new models developed during the project and potential for adaptation for RES (Month 42). Aritra will join Muhsin Kiliç and Joao Ramos.

### **3 Distribution of tasks (minutes)**

A series of tasks were identified to be performed in the next months until the next meeting in September:

- Beginning of April: members will revise the "final" version of deliverable 1.
- 15th April submission of deliverable 1.
- End of April, to share the information of simulation courses we have in the institutions involved in WG2. Milorad, Ricardo, Adolfo & Alberto/Daniel. The summary report of the courses available will be send to the SG.

- Mid June to send to Daniel the doi number of the published validated codes (at collector, system or building level) in order to start organizing the first deliverable (deadline month 30).

### **Working Group-3**

List of participants present at meeting:

1. Sandra Monteiro Silva - Portugal
2. Carlos Ochoa - Israel
3. Charalambos Tsioutis - Cyprus
4. Simon Borg - Malta
5. Rene Wansdronk – Netherland
6. Gerald (new member) – Switzerland
7. Jose (standing-in for Stefan Remke ) – Spain
8. Aggelos Zacharopoulos (AZ) – WG Leader, UK

Absent:

1. Manolis Souliotis - Greece
2. Trevor Hyde - UK
3. Tim O'Leary - Ireland
4. Artur Rusowicz - Poland
5. Rafaela Agathokleous - Cyprus
6. Tatjana Kosic - Serbia
7. Jasna Radulovic - Serbia
8. Luisa F Cabeza - Spain
9. Sarah McCormick - Ireland
10. Stefan Remke – Spain

#### **1. Welcome**

- The chair welcomed Jose and Gerald.

#### **2. Introductions**

- Participants of WG3 introduced themselves to the new WG members and provided short information about their scientific/professional background relevant to the action.

#### **3. Deliverable D3.1 - Review on BISTS**

- Report on what was supplied in relation to tasks handed out in the previous document (7 areas). As many of the WG participants are absent it is difficult to assess the status of the deliverable and plan for it. So far the following sub-reviews have been compiled by WG members (in orange are the sub-reviews that need finalising or have outstanding issues).

- ✓ Water heating: Aggelos, Rene, Tatjana
- ✓ PV/T: Sarah, Aggelos, Jasna
- ✓ **Energy Storage: Sarah, Luisa, René**
- ✓ Air heating: Tim, Charalambos

- ✓ Shading, Heating, Cooling: Simon, Sandra, Artur, Carlos
- ✓ Combi-systems (DHW+heating): René, Stefan
- ✓ Linked to other systems: Simon

- Aggelos will send an e-mail to remind all WG members of the outstanding work.
- The first year of the Action end at the end of April. Compilation of deliverable will have to be done in-line with the requirements of the COST office.
- Currently completed sub-reviews are in different formats. Aggelos will discuss with the Action chair the required format for the deliverable.
- An STSM for an ESR to prepare the deliverable report will be sought
- Aggelos + Simon + Sandra - formatting the whole deliverable once all sub-reviews are completed and format agreed.

#### **4. Deliverable D3.2 – STSMs**

WG3 will apply has applied for 1 STSM

- Luisa was not able to provide a student. She could not come herself.
- One more to be requested for completing review if within the timeline of Action

#### **5. Annual training school (D3.3):**

- Freiburg, 1<sup>st</sup> week of September: 1- 3 September – training school; 4 – 5 September meeting. The Action chair will provide all relevant details in later presentation. PhD and Masters Students to attend school.

#### **6. Deliverable D3.4 (Month 36)**

- CUT, UUlster, Rene have on-going projects who will provide baseline for D3.4 (design, fabrication, characterisation)
- WG members to identify other relevant activities in their own institutions/companies that fit under the Action D3.4
- All members should try and engage in activities that are relevant to D3.4 in their own institutions. They can be at any level e.g. undergraduate/postgraduate, and relevant to any of the tasks - design, fabrication or characterisation of BISTs.
- Brainstorming sessions to be carried out in sub groups. Ideas to be presented and discussed with group. Aim is to stimulate new ideas of innovative BIST systems.
- On-going activities on D3.4 to be reported in WG meetings. Members of WG are encouraged to discuss D3.4 activities with members of the other WGs.
- H2020 call will be discussed as part of the agenda. The aim to promote collaboration on proposal preparation.
- Fabrication: Short list of design projects which has to be done by members amongst their own University – Task (summary) by all.

### **Working Group-4**

At the TU1205 Corsica Meeting, the Taxonomy of BISTS was presented. This represented progress on the Limassol meeting. D. Kennedy requested that delegates provide further details and examples to populate the Taxonomy grid in order to bring the contents to reflect totally integrated examples of BISTS. Based on the Taxonomy, Case studies on BISTS were presented by M. Smyth. It was emphasised again that more Case studies are required for the COST Action.

Standards for testing and performance of Solar systems was presented. Flyer for COST Action TU1205 BISTS has been update and forwarded to Chairman.

#### **Deliverables by end of April 2014**

- Essential: Associated Projects
- Design
- Planning for future Agenda
- Networking (eg posters, presentations, communications)
- Symposium, Conference, Parallel session year 2, final location to be confirmed.

#### **Deadlines & Tasks**

- Deliverables versus MOU on Target
- Requirement for further case studies to be presented to the COST Action.