MINUTES FROM THE 3RD MANAGEMENT COMMITTEE MEETING OF

COST Action IC 1104

Random Network Coding and Designs over GF(q)

Ghent

20 September 2013

1. Welcome

Dr Marcus Greferath, Chair of Action IC1104, welcomed the participants to Gent and opened the meeting. The list of participants is in **Annex 1.** The quorum (2/3 of Parties) was reached at the beginning of the meeting: 16 country representatives out of 24 attended the meeting.

The Chair invited the three Management Committee members and Substitute Members who had previously not attended any MC meetings to introduce themselves. The relevant delegates introduced themselves and reported briefly about their professional background. These were Prof. Gunes Zeynep Kurt (Turkey), Prof. Marco Buratti (Italy), Prof. Vedran Krcadinac (Croatia) and Dr Ruud Pellikaan (Netherlands). The list of the Management Committee (MC) members nominated before 20/09/2013 is in **Annex 2**. A total of 21 participants from the following 16 countries were attending the meeting: Belgium, Croatia, Denmark, Estonia, Finland, Germany, Greece, Ireland, Israel, Italy, Netherlands, Serbia, Spain, Switzerland, Turkey, United Kingdom. This means that exactly 2/3 of all 24 participating countries were presented and hence the quorum was reached.

2. Adoption of the agenda

The Agenda as listed in **Annex 1** was adopted without any amendment.

3. Approval of the minutes of the MC Meeting in Bergen on April 19th , 2013

The Minutes of the previous MC (Bergen) meeting as listed in **Annex 7** were adopted without any amendment.

4. Update from the Action Chair

a. Status of the COST Action

The Chair noted that at the close of the first Grant Period, the budget was under-spent by €17 217.96. The financial report for the first grant period is listed in **Annex 8**. He noted that the under-spend was a consequence in part of attendance at MC meetings being lower than foreseen.

The Chair then gave a summary of the effective use of the budget in the first Grant Period, referring to the STSMs undertaken throughout the year and congratulating the organisers of the very successful Training School, Working Group Meetings, and Workshops. The Chair also thanked Joachim Rosenthal for utilising the unexpectedly available budget in the last quarter of the first Grant Period by hosting a meeting in Zurich at short notice.

The budget allocated to the Action for the development of the second Annual Budget Plan and Work Plan covering 12 months (August 1, 2013 – July 31, 2014) is 156 200 EUR which includes the maximum of 15% for the Grant Holder Institution to cover the necessary costs for financial and scientific administration and coordination. The Work and Budget Plan is included in **Annex 9**.

The Chair noted that the Work and Budget plan for this year has been designed in light of the attendance and expenditure rates during the first grant period in order to more effectively distribute the budget. The budget for Ghent did not depend on full attendance but partial attendance, as this was a tendency in the first grant period.

b. STSM Status

Until the MC meeting in Bergen, 4 STSMs were approved. Their details are listed in the minutes of the Bergen meeting. A further 3 STSMs were approved till the end of the first grant period. These were:

Name	From	To	Period	Grant	ID	Approved	Title
Grant Period 1: 2012-2013							
Dr Vitaly Skachek	Tartu	Dr Eimear Byrne, Dublin	2013-06-24 to 2013-07-07	1 274.00	14204	2013-08-05	"Constructions of Codes for distributed storage" and "Index coding with error correction" .
Ms Antonia Wachter-Zeh	Ulm	Prof. Tuvi Etzion, Haifa	2013-06-30 to 2013-07-06	1 100.00	13774	2013-04-21	Constant-Rank Codes and Connections to Constant-Dimension Codes
Dr M. Angeles Vazquez-Castro	Barcelona AUB	Dr Axel Kohnert, Bayreuth	2013-07-08 to 2013-07-12	900.00	14327	2013-06-06	MAC Group Actions

3 STSMs have already been approved for the 2nd budget year and approximately 10 are planned. Those already approved are:

Name	From	To	Period	Grant	ID	Approved	Title
Grant Period 2: 2013-2014							
Ms Anamari Nakic	Zagreb	Prof. Leo Storme, Ghent	2013-09-23 to 2013-12-20	2 500.00	14464	2013-06-14	Analysis of properties of designs over finite fields
Dr Cristina Martinez	Barcelona (AUB)	Prof. Camilla Hollanti, Aalto University	2013-09-30 to 2013-10-11	1 700.00	15081	2013-08-22	Coding theory of elliptic curves and abelian varieties
Prof. Camilla Hollanti	Aalto University	Montserrat Alsina, Polytechnic University of Catalunya	2014-01-01 to 2014-02-28	2 500.00	15082	2013-08-23	Quaternion algebras and Fuchsian codes

c. News about the Vademecum

The Vice-Chair, Mario Pavcevic, reported on the new Vademecum.

Firstly, he drew attention to the further clarification in the new Vademecum of member status. He emphasised the importance of becoming a registered member of the project for all of those who are related to the project, who have attended events, and who are qualifying for reimbursement under COST. While compiling the annual report, it became clear that some involved researchers had not been fully registered and not reimbursed in some cases.

He noted that the local organiser support grant has risen to €20 per day per participant, which provides more support to hosting institutions. The local organiser for Ghent, Jan de Beule, asked about the difference between the budgeted amount for LOS according to the Work and Budget plan and the flat rate grant amount. Mario clarified the difference for him and explained that the final LOS grant, if supported by all necessary documentation, could be higher than €20 per participant per day if necessary.

Mario Pavcevic noted the recent provision in the Vademecum for the dissemination budget to be used towards representatives of the project travelling to up to 2 conferences or other events per year to represent the project. Researchers can be partially supported up to €500. Such a grant has not been foreseen in the work and budget plan, as this was compiled prior to 1st June, but it was noted that in the event of

an underspent, it may be possible for support such dissemination activity. Leo Storme suggested a number of future conferences that may be suitable should funds become available.

5. Promotion of Early Stage Researchers (ESR), Gender Balance

The Chair asked the administrative assistant, Clara Grimes, to report on the promotion of Early Stage Researchers and Gender Balance in the project for the period between the second Management Committee Meeting in Bergen until the Management Committee Meeting in Ghent. C. Grimes reported that Early Stage Researchers are actively prioritized for support for participation in the project. She noted the percentage of participants in Action activities since the last MC meeting were as follows:

- 38% of participants in the Working Group meeting in Bergen were ESRs
- 54% of participants in the Working Group meeting in Zürich were ESRs
- Of the 6 STSMs carried out and approved since the last MC meeting, 4 were granted to ESRs

Regarding gender balance, she noted that:

- 15% of participants in the Bergen meeting were female
- 29% of participants in the Zürich meeting were female
- Of the 6 STSMs carried out and approved since the last MC meeting, 5 researchers travelling on STSMs were female

She also drew attention to the provisions in COST activities for childcare and family friendly meeting planning policies.

6. Update from Grant Holder

C. Grimes noted that University College Dublin is satisfied with the Action's financial reporting, and that the EU Research Office at UCD is impressed with the Action's progress so far.

7. Update from the COST Office

No representative of the COST Office was present to provide an update.

8. Update from DC Rapporteur

The DC Rapporteur was not present to provide an update.

9. Annual Progress Conference in Malta, June 12-13

The Vice-Chair Mario Pavcevic attended the conference and reported on the results and administrative aspects on the project in a 20-minute talk held on the second morning of the conference about the first year's outcomes of our project. The DC Rapporteur of the project, Prof. Peter Milanov, expressed his satisfaction with the ongoing research carried out within the project.

It was noted that the Memorandum of Understanding is the crucial document on which all Action decisions are based, both scientific and administrative. M. Pavcevic noted that the acceptance rate for project proposals for ICT is 5-10%, closer to 5% in years where 6 actions have been accepted. He reported that in light of Horizon 2020, although it will not be possible to extend the project after the fourth year, as Horizon 2020 has planned further financial support for COST, there may be a possibility of continuing the Action's work after the end of the project by seeking other financial support.

He clarified the fact that Invited Speakers, which refers to non-action members invited to give a talk at a meeting, may be reimbursed only once during the lifetime of the project. It is recommended that external experts join the project (then also without financial support by COST), since then ESR can visit them through the STSM scheme. He gave the example of Canada joining the project, and clarified that if Canada were to become a member, the representative from there would not be eligible for financial support by COST to attend meetings in Europe, however, ESRs would be eligible for STSM grants to study in Canada. Mario suggested that interested former invited speakers can be invited to join the project in order to facilitate STSMs for ESRs there.

10. Follow-up of MoU objectives: Progress reports

As the Management Committee Meeting took place at the end of 3 days of Working Group meetings, the Working Group leaders did not report comprehensively on the recent scientific activities of the Working Groups, as the members were already up to date on this. However, they did provide a brief update for the benefit of the members of other Working Groups.

(a) Working group I - report by T. Etzion

Tuvi Etzion noted that WG members have been sending reports of their progress to him on an ongoing basis. He encouraged WG members to seek additional funding.

Tuvi also added that as a general reflection of the project's progress, he found that out of 30 years of work on designs and codes over GF(q), the last year was the most fruitful one, which can be directly attributed to COST Action IC1104.

(b) Working group II - report by A. Vazquez Castro

A. Vazquez Castro reported that progress has been visible in the presentations by working group leaders during the conference. Requests for new membership has been filed from Ireland, Istanbul, France, Barcelona and elsewhere. For session planning, the group was in contact and discussions among participants took place via e-mail. For other events, she would like more time reserved for informal discussions as this could be helpful.

(c) Working group III - report by S. Blackburn

S. Blackburn noted that talks by Oliver Gnilke and Camilla Hollanti had been relevant to the objectives of cryptographic importance, particularly bank security. Michelle Effros's talk was also relevant and important. He hopes that Phillippe Gaborit will present on rank metric based cryptography at a future meeting. Occasional comments regarding relevant aspects, for example, security issues, have reached Simon Blackburn, but he encourages WG members to report to him with any relevant discussions.

(d) Working group IV - report by J. Rosenthal

Joachim Rosenthal reported that there is synergy between the work carried out by WG 1 and 4, so the two groups are currently collaborating. Working Group 4 wished to create a website in order to document the results, but the COST website is centrally maintained. He suggested that there is a central server but with a facility for decentralisation, for example if each working group has a website. The Chair agreed that alternative possibilities for dissemination of results online could be discussed.

(e) Working group V - report by A. Kohnert

Axel Kohnert reported that a new member, Reinhard Laue, has joined WG 5. A problem for the WG is that the subject is very broad from fundamentals to distributed storage. The talk by Natalia Silberstein today helped to bridge this gap. He felt that there should be more time for discussion and that in future meetings, some time should be given to discussion. He suggested a database for q-designs so that anyone who needed q-designs could download them.

11. Scientific Planning

(a) Update by Vitaly Skachek regarding European School of Information Theory

Vitaly Skachek provided an update on the European School on Information Theory in Estonia.

He reported that the event is supported by the IEEE IT Society and approved by the Board of Governors of the IT Society. He had previously approached the Chairs in Bergen as some talks would be relevant to the COST action. He noted that there are some issues regarding the date of the event. EuroCrypt was originally planned for the week before the event, but it was rescheduled because it was supposed to be the same week in the same place as the Eurovision. It will be rescheduled either one week later or two weeks earlier because of this.

Two presentations will be related to topics of interest to the COST action. It is an information theory school so it should be of interest to a broad audience. Vitaly had some informal discussions with WG leaders of the Action. In view of the Training School in Barcelona, it was suggested that there should be different teachers/speakers than at that event. It is also not possible to invite speakers who were previously invited. Gender balance will also have to be taken into account. On the mathematical side, a suggested speaker was Camilla Hollanti.

On the engineering side, an external speaker Bobak Nazer was suggested. His paper with Michael Gastpar was awarded the joint IEEE IT and Comm. Soc. best paper award on physical layer network coding, so it would be difficult to find a more suitable speaker. A final decision of the MC regarding the invited speakers will be combined with the change of dates approval at the next opportunity by email voting.

(b) Update by Christine Bachoc (or representative) regarding upcoming Conference in Bordeaux

The chair communicated updates from Christine Bachoc regarding the upcoming meeting in Bordeaux from 16-20 June. The Local Organiser Christine Bachoc sent the following information via email regarding the upcoming conference in Bordeaux:

1) The local organizers for the Bordeaux workshop have settled a scientific committee consisting of Sasha Barg, Frank Kschischang and Madhu Sudan in addition to the locals which are Christine Bachoc and Gilles Zemor. This committee will decide for a list of invited speakers for main talk; they also plan to call for propositions for shorter talks to complement the program

2) The organizers have reserved a number of rooms in a rather inexpensive hotel.

3) The organizers have come up with a local budget of 30000EUR that is hoped to cover: lunches, coffees, expenses for non cost invited speakers and maybe also the dinner/excursion.

4) A web site is in preparation.

5) Any suggestions from the Management Committee will be welcome.

A number of members of the Management Committee discussed the possibilities for planning talks at the conference that will make the event as attractive as possible so as to attract as many Action researchers as possible. Cedomir Stefanovic and Angeles Vazquez Castro raised the question that some researchers may find the programme restrictive and more weighted towards Information Theory and mathematics than other aspects of engineering. In response to this, the Chair suggested that the MC propose an additional member to the organizing committee, perhaps a representative of the engineers in the project. A number of MC members expressed their confidence in the organising committee as it currently stands and did not deem it necessary to add any further members to this committee. A. Vazquez Castro suggested allocating time during the conference for informal round-table discussions specifically for COST working groups. A general consensus was that the MC was very impressed and satisfied with the renowned researchers comprising the organising committee, but that as the event would be funded by COST, additional emphasis on COST objectives could more effectively be targeted if there was additional input from Action members. One way for this to be achieved would be for a further COST representative to be invited from the local organiser to join the organising committee, although the MC is open to alternative solutions. The chair will inform Christine Bachoc about this discussion.

(c) Long-term planning

The Chair noted that the budget allows for 3 meetings per year and that submissions are requested from candidates to organize events for the third grant period (August 2014 - July 2015).

The two MC representatives from Turkey, Gunes Zeynep Kurt and Ferruh Ozbudak reported that they intend to organize an MC meeting and workshop during the next grant period.

The Vice-Chair Mario Pavcevic encouraged engineers in the Action to organize an event in view of the previous discussion surrounding the conference programming for Bordeaux.

Axel Kohnert suggested scheduling a working group meeting with more space for discussions alongside the April 2015 possibly proposed conference in Thurnau, Alcoma 15.

The guest member O. Ytrehus (representing Norway) suggested a meeting before or after the International Castle meeting in Portugal in September 2014.

M. Pavcevic reminded MC members that there will not be another MC meeting before having to compile the work and budget plan for the third year.

The Chairs requested proposals for events.

Cedomir Stefanovic and Dejan Vukobratovic suggested a more informal non-conference event in Novi Sad, whereby conference papers are not required but work-in-progress.

(d) Dissemination planning

The Chair reminded the MC that there may be a possibility for the Action to be represented at a conference if there is any underspend towards the end of the grant period.

12. Requests for new members: Sweden

Thomas Westerbäck of the KTH Royal Institute of Technology in Stockholm is a WG member but Sweden is not a COST country. Ralph Stuebner of the COST office has informed the Chairs that it is not impossible for Sweden to join but it may be a time-consuming process. It was proposed that Sweden joins the Action. T. Westerbäck applied to visit Camilla Hollanti on an STSM but this was not possible as Sweden has not yet joined the Action. Once Sweden has joined, C. Hollanti hopes that the STSM may still be possible.

13. Non-COST applications to the Action

Wei Xiang, U Southern Queensland (AU), has applied to join the Action. The Management Committee has endorsed the application and the application is now in the COST office for approval. Dejan Vukobratovic would be interested in hosting that applicant as they have similar research interests.

14. AOB

Camilla Hollanti and Vitaly Skachek would like further clarification as how non-COST countries can join the Action. The Vice-Chair drew their attention to the relevant parts of the Vademecum and the administrative assistant Clara Grimes offered to compile a summary of the necessary steps for each case (i.e. Sweden, USA and Canada).

The Local Organiser Jan de Beule informed the MC that all of the talks from the Working Group meetings are now available online.

15. Location and date of next meeting

The MC will have its next meeting on June 20th 2014 in Bordeaux, following the conference at the same location.

16. Summary of MC decisions

None.

17. Closing

The MC Chair thanked all MC members present and closed the meeting.

List of Annexes

Annex 1: Agenda

Annex 2: Signed list of the Management Committee members

Annex 3: Electronic Voting (3. Oct 2013): Luxembourg Macedonia (Result: unanimously approved)

Annex 4: Voting (2. Feb 2014): Supportee List Information Theory School Tallinn (Result: unanimously approved)

Annex 5: Voting (2. Feb 2014): WG5 Leadership Hollanti and STSM Co-ordinatorship Wassermann (Result: unanimously approved)

Annex 6: Voting (16. Apr 2014): Supportee List ACN2014 Bordeaux (Result: unanimously approved)

Annex 7: Minutes of the Bergen MC meeting

Annex 8: Financial Report for Budget year 2012/2013

Annex 9: Work and Budget Plan for Grant Period 2 (2013/2014)