



Project no. 248992

Project acronym: NEUNEU

Project title: Artificial Wet Neuronal Networks from Compartmentalised
Excitable Chemical Media

Small or medium-scale focused research project (STREP)

**Deliverable 5.2 - Periodic management report for year 2,
Version 2**

Period covered: from 1.2.2010 to 31.1.2011 Date of preparation: 18.9.2009

Start date of project: 1.2.2010 Duration: 36 months

Project coordinator name: Dr. Peter Dittrich
Project coordinator organisation name: Friedrich Schiller University Jena

Periodic Management Report

The Deliverable D5.2: Periodic management report for year 2 is identical to the 2nd Project Periodic Report, which was submitted in independent documents.

This report describes the management actions and the resources that were spent so far by the project.

3.2.3 Project management and 3.4 Explanation of the use of the resources, Version 2

3.2.3 Project management during the period

In the following, we summarize management of the consortium activities during the period.

Consortium management tasks and achievements;

- Financial coordination as planned
- Internal communication infrastructure maintained:
 - Wiki for internal communication, especially reporting
 - internal file repository under subversion (SVN)
 - public Website neu-n.eu (See Deliverable D6.1) with content management system that allows each beneficiary to edit the website's contents
 - one login/passwd for all web services
- Coordination of reporting
- Communication with EC, forward collated reports
- Coordination of meetings and exchange visits
- Coordination of inter-project interaction through the coordination and support action COBRA

Publications in the popular science media:

- ComputerWeekly.com: Inventing the future of IT, April 2011
- NewScientist.com Blogs: "One Per Cent": Chemical computers solve shapely puzzles, April 19, 2011
- technologyreview.com: The Physics arXiv Blog: How Vesicles Compute With Chemical Cocktails, April 2011
- Lenta.ru: Russian language news portal, April 2011
- www.kv.by: Computer News, Belorussian news portal, April 2011
- Presentation of the NEUNEU project at the event "Lange Nacht der Wissenschaften Jena 2011", by the Service Centre Research and Transfer, Friedrich-Schiller University Jena, 25 November, 2011.

Problems which have occurred and how they were solved or envisaged solutions;

- Late employment of SOTON researchers led to a delay in producing Deliverable D1.1, which is now available. See Section 3.2 "Objectives and Work Progress for Details".
- Due to late employment of JENA researcher Deliverable D3.5 "emergence and scalability at architectural level" has to be postponed.
- Envisaged solutions: We will spend more PMs in the third year and apply for a cost neutral extension of the project period (see below)

List of project meetings, dates and venues (Year 2):

- 12-18 March 2011: Gerd Grünert visiting ICFPAN from JENA
- 28-29 March 2011: 3rd Project Meeting, 1st Review Meeting, in Brussels
- 20.05-11.06, 2011: Jan Szymanski visiting SOTON from ICFPAN
- 8-9 August, 2011: management meeting in Paris
- 12 August, 2011: scientific exchange, Workshop INCUP 2011: Information Coding in Unconventional Computing Substrates at ECAL 2011 (European Conference on Artificial Life) organised by J. Gorecki and A. Adamatzky, in Paris. Grouped over 20 participants and a substantial part of presentations was related to the NEUNEU activity
- 13-25 October 2011: scientific exchange, Alexandra Diem visiting SOTON from JENA
- 24-25 November 2011: 4th Project Meeting in Warsaw
- 6 - 8 January 2012, scientific exchange, Peter Dittrich visiting SOTON from JENA
- 12-22 January 2012: scientific exchange, Alexandra Diem visiting SOTON from JENA

Project planning and status;

Status: With respect to the PMs spent, the project progresses as planned. However we have spent the PMs slower than expected, so that D3.5 has to be postponed.

Total amount of PM for three years: 293 PMs

Planned amount of PMs spent
(Year 1 and Year 2): 156 PMs in terms of deliverables
180 PMs roughly according to Gant Chart

Actual amount of PMs spent funded by
the project (Year 1 and Year 2): 137.3 PMs

Underspending of PMs after Year 2: 43 PMs (approx.)

Note that the calculation above does not include 23 PM related to this project that were conducted at ICFPAN but not funded by this project.

Mitigation strategy:

In our opinion, the best results with the given funds would be achievable by a cost neutral extension of the project, i.e. an extension of the project period *without* requesting any further funds. This would allow use to spend more person months on personal that is already familiar with the project.

A cost neutral extension of eight month would allow us to conduct the work in an optimal way, therefore we propose a **cost neutral extension by 8 months (i.e. until 30. September 2013)**. This would also allow us to disseminate the final results of the project on various conferences that typically take place until end of September.

See “**PPR Annex B - Explanation for the cost neutral extension and the required changes of Annex I**” attached to this Project Periodic Report for a detailed description.

In this revised plan, we have moved the due dates according the shift of employments and the expected availability of personal resources and adapted some deliverable to the current state of the project.

Impact of possible deviations from the planned milestones and deliverables, if any;

- does not apply -.

Other co-ordination activities

- We are participating in the coordination support action COBRA: www.cobra-project.eu
- Presentation Dittrich, P. Semiotics of Biological Shapes. *Paris Interdisciplinary PhD Symposium*, Paris, France, June 14, 2011
- We co-organised the *1st COBRA Workshop on Biological and Chemical Information Technologies*, 8 August 2011 at ECAL2011. More details on: <http://www.cobra-project.eu/biochemit2011.html>
- We are co-organising the *1st COBRA Summer School on Biological and Chemical Information Technologies* (BioChemITSchool2012), which will be held on 9. - 21. September 2012, in San Candido, Italy.
- Invited talk:Kirov, B.; Dittrich, P. Biological and Chemical *ICT. Twelfth Conference on Membrane Computing 2011* (CMC12), Fontainebleau/Paris, France, August 23, 2011

No changes to the legal status of the beneficiaries occurred.

Development of the project website, if applicable;

We regularly updated the public website, adding current events, project media, software and news about the project. (See Deliverable 6.1)

3.4 Explanation of the use of the resources

The current cost figures are preliminary.

Table 3.1 Personnel, subcontracting and other major cost items for Beneficiary 1: JENA

Work Package	Item Description	Amount in € with 2 decimals	Explanations
1,2,3,4	Personnel direct costs, RTD (A)	57,594 €	12 person months for 2 PhD students, half + full positions, student helpers
5	Personnel direct costs, Management (C)	9,184 €	2 person months for management
6	Personnel direct costs, Other (D)	4,592 €	1 person month for dissemination
1 - 6	Travel	7,035.00 €	COBRA/ECAL Conference and Workshop (Paris), CMC12 Conference (Paris), Project Meeting (Warsaw)
1 - 6	Depreciation	3,154.00 €	
1-5	Consumables	407 €	
	Remaining costs	104 €	
	Indirect costs	49,241.40	
TOTAL		131,310.40 €	

Table 3.2 Personnel, subcontracting and other major cost items for Beneficiary 2: SOTON

Work Package	Item Description	Amount in € with 2 decimals	Explanations
1,2,4,6	Personnel costs	€ 118,785.78	1 Postdoc (Fabrication) 11 months, 1 Postdoc (Chemistry) 11 months, 4 senior staff (4.52 months)

	Consumables	€ 22,085.66	Chemical supplies (incl. synthetic lipids), components for fluidics, rapid prototype resin for molds [1]
	Travel	€ 9,886.89	Travel to NEUNEU Meetings in Brussels and Warsaw; COBRA/ECAL, Paris; NanoBioTech, Montreux
	Other indirect costs	€ 122,200.67	Generic indirect costs, incl. heating, electricity, water, laboratory-based infrastructure technicians, laboratory-based estates costs. [2]
TOTAL		€ 272,959.00	At £ 0.8312 = € 1

Expected Adjustments: We expect the following adjustments of the costs for Beneficiary 2 (SOTON).

Table 3.2b Expected Adjustments of Form C for Beneficiary 2: SOTON

Work Package	Item Description	Amount in € with 2 decimals	Explanations
	Fabrication Consumables Year 1	€ 8421.56	At £ 0.8536 = € 1
	Fabrication Consumables Year 2	€ 19249.28	At £ 0.8312 = € 1

For the fabrication consumables SOTON finance does not yet have the exact figures, but these numbers should be within a few percent. Form C will be adjusted as soon as the exact figures are known.

Notes:

[1] Consumables are typically between £10k and £15k per person per year in the laboratory. The costing of the proposal assumed the lowest (£10k/person-year) rate, because the consumables used in fabrication were costed as part of the cleanroom indirect costs. The "Other indirect costs" include the wet-laboratory facility costs, but not the cleanroom/fabrication costs.

[2] These costs are calculated according to the "Simplified method" costing model used by SOTON. The pricing accountant at SOTON can provide more detail if this is required.

Table 3.3 Personnel, subcontracting and other major cost items for Beneficiary 3: ICFPAN

Work Package	Item Description	Amount in € with 2 decimals	Explanations
1-2	Personnel direct costs	39,735.00 €	12 person months for senior scientist, 10 person-months for a PhD student, 6 person-months for a postdoctoral researcher
1 - 2	Equipment	851.00€	one laptop, digital laboratory balance
1-6	Travel	5748.00€	Travel to NEUNEU Meeting in Brussels conferences ECAL 2012, FUNCODYN, Jan Szymanski visit to SOTON
1 - 6	Consumables	2151,00€	Chemical supplies (incl. synthetic lipids),computer parts, printing
1 - 6	Remaining costs	91,00€	
	Indirect costs	29,145.00 €	
TOTAL		77,721.00 €	1 euro = 4.2005 PLN (rate on February 1st, 2012)

Table 3.4 Personnel, subcontracting and other major cost items for Beneficiary 4: UWE

Work Package	Item Description	Amount in € with 2 decimals	Explanations
1,2,3,4	Personnel direct costs	89,886.00	18.8 person months for 1 full-time RA and 3 researchers part-time on project
	Travel	3,577.00	Workshop in Paris: Project meetings in Brussels and Warsaw

	Indirect costs	56,077.80	
	TOTAL:	149,640.08	Exchange Rate? 1 euro = 0.8329122781 GBP (rate on February 1st, 2012)

Table 3.5a: Person Months per Project Partner and per Work Package: **Year 2:**

Year 2	WP1	WP2	WP3	WP4	WP5	WP6	total
JENA	1	1	8	2	2	1	15
SOTON	22	1.8	1.5	0.8	0	0.4	26.5
ICFPAN	16 + 8 un- payed	11.5 + 6 unpayed	0	0	0	0.5	28 + 14 un- payed
UWE	2	0.7	7.2	8.9	0	0	18.8
total	41 + 8 unpay ed	15.0 + 6 unpayed	19.7	11.2	2	1.9	90.8 + 14 un- payed

Table 3.5b: Person Months per Project Partner and per Work Package **Year 1:**

Year 1	WP1	WP2	WP3	WP4	WP5	WP6	total
JENA	0	0	6	0	1	2	9
SOTON	11.2	0.5	0.0	0.3	0	0.2	12.2
ICFPAN	11	9 unpayed	0	0	0	0	11 + 9 unpaye d
UWE	2.3	10.9	0.7	0.4	0	0	14.3
total	24.5	11.4 + 9 unpayed	6.7	0.7	1.0	2.2	46.5 + 9 un- payed

Note that the “unpayed” PMs describe work not funded by the project but related to the project.