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Types  
Types for Proofs and Programs

Coordination Action  
FP6-2002-IST-C

Periodic management report no 1

**Period covered:** Sept 1, 2004 – Aug 31, 2005

**Date of preparation:** November 8, 2005

**Duration of project:** Sept 1, 2004 – Aug 31, 2007

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## Summary

The aim of the research in the Types consortium is to develop the technology of formal reasoning and computer programming based on Type Theory. This is done by improving the languages and computerised tools for reasoning, and by applying the technology in several domains such as analysis of programming languages, certified software, formalisation of mathematics and mathematics education.

The funding for the Types project goes to coordination of and communications between research groups. The research itself is funded by other sources. The Types consortium receives funding for three annual meetings to communicate recent work throughout, six smaller thematic workshops on designated research themes, one summer school, short courses and short visits between sites.

The consortium consists of 35 research groups from universities and industries in Europe. It would have been unfeasible to let each of these groups be full participants in the action. In order to manage this, we have created a two-level hierarchy with 15 main sites (the contractors of the project) and 21 subsites (subcontractors). The following are the main sites (contractors): Chalmers, CNRS – Paris 7, INRIA-Futurs, INRIA-Sophia, Paris – Sud, Munich – LMU, Munich – TU, Nijmegen, Bialystok, Royal Holloway, Edinburgh, Manchester, Torino, Udine, Warsaw, Tallinn. The small sites (subcontractors) are: Bergen, Helsinki, Stockholm/Uppsala, Minho, Padova, Bologna, Dassault-Aviation, Grenoble, France Telecom, Kent, Novi Sad, Krakow, Savoie, Swansea, Toulouse, Birmingham, Nottingham and Sheffield.

## 1 Justification of major cost items and resources

Each site has spent 5000 – 10000 euros on trips to the Types meeting and to the small workshops.

We have had no major cost items.

The low figure for expenses at Chalmers has two reasons. The cost for the summer school (lecturers and grants) will be declared during the next period. The summer school was held in the end of August and only a small fraction of it could be paid during this period. In the budget we had calculated all expenses for the summer school to occur during this period. The cost for one senior researcher (around 3000 euros) will also occur during the next period.

## 2 Form C Financial statement per activity for the contractual reporting period

This section is not present in the electronic version of this document. The original signed documents are sent to Brussels together with a paper version of this document. A summary of the Form C is found on page 3

## 3 Summary financial report

Table 1: Cost Budget Follow-up, Sept 1, 2004 - Aug 31, 2005

Site	Expenditure	Budget	Actual cost	Spent %	Remaining
Chalmers	Management	43 667	2 979		
	Coordination	22 667	14 338		
	Indirect cost	13 267	3 463		
	<b>total cost</b>	<b>79 600</b>	<b>20 780</b>	<b>26%</b>	<b>58 820</b>
CNRS/Universite Paris 7	Coordination	9 100	4 395		
	Indirect cost	1 820	879		
	<b>total cost</b>	<b>10 920</b>	<b>5 274</b>	<b>48%</b>	<b>5 646</b>
INRIA	Coordination	21 233	4 440		
	Indirect cost	4 247	888		
	<b>total cost</b>	<b>25 480</b>	<b>5 328</b>	<b>21%</b>	<b>20 152</b>
Universite Paris Sud	Coordination	12 133	7 341		
	Indirect cost	2 427	1 468		
	<b>total cost</b>	<b>14 560</b>	<b>8 809</b>	<b>61%</b>	<b>5 751</b>
LMU Munchen	Coordination	6 067	1 166		
	Indirect cost	1 213	233		
	<b>total cost</b>	<b>7 280</b>	<b>1 399</b>	<b>19%</b>	<b>5 881</b>
TU Munchen	Coordination	9 100	3 937		
	Indirect cost	1 820	787		
	<b>total cost</b>	<b>10 920</b>	<b>4 724</b>	<b>43%</b>	<b>6 196</b>
Nijmegen	Coordination	6 067	8 445		
	Indirect cost	1 213	1 689		
	<b>total cost</b>	<b>7 280</b>	<b>10 134</b>	<b>139%</b>	<b>-2 854</b>
Bialystok	Coordination	6 067	6 842		
	Indirect cost	1 213	1 368		
	<b>total cost</b>	<b>7 280</b>	<b>8 210</b>	<b>113%</b>	<b>-930</b>
Royal Holloway	Coordination	21 233	12 329		
	Indirect cost	4 247	2 466		
	<b>total cost</b>	<b>25 480</b>	<b>14 795</b>	<b>58%</b>	<b>10 685</b>
Edinburgh	Coordination	6 067	4 660		
	Indirect cost	1 213	932		
	<b>total cost</b>	<b>7 280</b>	<b>5 592</b>	<b>77%</b>	<b>1 688</b>
Manchester	Coordination	9 100	4 047		
	Indirect cost	1 820	809		
	<b>total cost</b>	<b>10 920</b>	<b>4 856</b>	<b>44%</b>	<b>6 064</b>
Torino	Coordination	9 100	5 349		
	Indirect cost	1 820	1 070		
	<b>total cost</b>	<b>10 920</b>	<b>6 419</b>	<b>59%</b>	<b>4 501</b>
Udine	Coordination	9 100	7 719		
	Indirect cost	1 820	1 544		
	<b>total cost</b>	<b>10 920</b>	<b>9 263</b>	<b>85%</b>	<b>1 657</b>
Warsaw	Coordination	9 100	-		
	Indirect cost	1 820	-		
	<b>total cost</b>	<b>10 920</b>	<b>-</b>	<b>0%</b>	<b>10 920</b>
IoC Tallinn	Coordination	5 088	3 991		
	Indirect cost	1 018	798		
	<b>total cost</b>	<b>6 106</b>	<b>4 789</b>	<b>78%</b>	<b>1 317</b>
Total		245 866	110 373		135 493