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## Short report on the visit of the DTI Mission

### UK DTI International Service

"GlobalWatch "Mission to CERN in Distributed IT Applications"  
June 2004



IT-TT-Report-DTI-Mission  
F. Fluckiger

Version 1  
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More on <http://cern.ch/it-tt> -> News

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## 1 Background

A mission of the UK Department of Trade and Industry (DTI) visited CERN between the 28th and 30th of June 2004. It provided three days of detailed interaction between the mission participants and CERN staff. The mission was sponsored by the UK DTI's Global Watch Service. It was formed of nine representatives from the UK Information and Communications Technologies industry.

*A list of the UK delegates can be found in Appendix 1.*

The mission was organized by Mr. Nathan Hill, Industry Coordinator for PPARC and UK Technology Transfer Coordinator for CERN, and the delegation was chaired by Mr. Ted Ridgway Watt, from The Global Watch Service, DTI.


*More on DTI missions can be found in "About UK DTI missions", Appendix 2.*

### **Aim of the visit: Excerpt from the Mission Introductory document**

*"The aim of the mission was to study techniques for developing distributed systems over homogeneous and heterogeneous computing resources and to look at specific examples of applications implemented using such computational clusters. Grid technology developed at CERN is already being used for particle physics and healthcare applications. CERN is a unique resource and the UK could benefit from the technology advances that have only been possible as a result of CERN's scale and multinational membership. Mission participants will have the opportunity to gain an understanding of both the reasons for these technology developments at CERN and how they could be exploited within their own sectors in the UK. The UK is now regarded as ready to adopt GRID technologies and CERN is the foremost application developer in this field."*

## 2 Programme

The programme of the visit was formed of two parts, one organized by the SG/ETT Unit and the other by the IT Department.

- The ETT part included the overall presentation of CERN, technology transfer at CERN and projects coordinated by the unit as well as a visit of the Atlas Site.
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- The IT part included presentations on computing at CERN and on major projects (LCG, EGEE, openlab), as well as a selection of technical topics covering a wide spectrum of activities. It also comprised a full half-day dedicated to PH Department activities: one session was organized on Physics Software and another one on on-line computing at one LHC experiment (ALICE).

The items presented, as well as their respective weight, had been selected by the delegates, from a list of topics proposed two months before the event.

*The full programme is available in Appendix 3.*

## 3 CERN participants

A total of 37 CERN people from four Departments (FI, IT, PH, SG) participated in the event. This included the CERN Secretary General, the Head and Deputy Head of the IT Department, the LCG Project Leader, the EGEE Technical Director, the openlab Manager, the leader of the ETT-TT group, the leaders of the PH-AID and PH-SW groups, the leaders of the IT-AIS, IT-FIO, IT-DB, IT-GD, IT-IS, IT-UDS groups, as well as the deputy leader of the FI-PI group.

*A full list of CERN participants is available in Appendix 4.*

## 4 Organization

### 4.1 Venue

The visit was formed of six half-days. The first one took place in Room B, the five others in the openlab visitor area (“openspace”).

### 4.2 Documentation

Delegates were provided with a selection of general documents on CERN and computing activities, as well as with the handouts of the technical presentations.

*A list of document distributed to the delegates is available in Appendix 5.*

### 4.3 Supporting web site

A web site to store information and document was set up, as part of the IT-TT site (<http://cern.ch/it-tt>). In particular, all presentation material was made available through the site.

### 4.4 Use of CERN CDS Agenda Management system

The agenda of the meeting was maintained on-line, and made available to delegates as well as to CERN participants using the CERN Document Server (CDS) Agenda Management tool. The system was one of the CERN developments presented to the delegates.

### 4.5 Social events

- A lunch was organized the 28th by ETT.
- A reception was organized in the evening of the 28th by the British Consulate in Geneva.
- A dinner was organized by IT the 29<sup>th</sup> evening.



Nathan Hill, Mission Organizer and Maximilian Metzger, CERN Secretary General

## 5 Results of the visit

The visitors expressed their overall satisfaction of the content and the organization of the visit, congratulating CERN for the high quality of the presentations and the underlying work.

They expressed specific interest in the openlab framework. Among the technical topics presented, they singled out Computer Security as a possible subject for future collaboration.

A report will be prepared by the mission and submitted to the DTI Global Watch Service. It will be officially presented on the occasion of the [CERN Industry Showcase](#), to take place in London on the 16<sup>th</sup> of September 2004.

## 6 Appendixes

### 6.1 List of UK delegates

Name	Job Title	Organisation	Contact Details
Nathan Hill	Managing Director Qi3 Industry Coordinator for PPARC and UK Technology Transfer Coordinator for CERN	Qi3/PPARC	T: 01223 422405 E: <a href="mailto:nathan.hill@qi3.co.uk">nathan.hill@qi3.co.uk</a> Qi3, St Johns Innovation Centre, Cowley Road, Cambridge, CB4 0WS <a href="http://www.qi3.co.uk">www.qi3.co.uk</a> , <a href="http://www.pparc.ac.uk">www.pparc.ac.uk</a>
Ted Ridgway Watt	ITP Telecommunications, Europe	International Technology Promoters, Pera	T: 01223 207052 M: 07747 770971 E: <a href="mailto:ted.ridgway-watt@pera.com">ted.ridgway-watt@pera.com</a> Pera Innovation Park, Melton Mowbray, Leicestershire, LE13 0PB <a href="http://www.pera.com">www.pera.com</a>
Dr Maziar Nekovee	Senior Research Scientist, Complexity Research Group	BT Exact	T: 01473 645470 E: <a href="mailto:maziar.nekovee@bt.com">maziar.nekovee@bt.com</a> Polaris 134, BT Exact, Martlesham Suffolk, IP5 3RE <a href="http://www.btexact.com">www.btexact.com</a>
Derek Greer	Head of Engineering Services	Vega Group PLC	T: 1707 362636 M: 7801 583057 E: <a href="mailto:Derek.Greer@vega.co.uk">Derek.Greer@vega.co.uk</a> 2 Falcon Way, Shire Park, Welwyn Garden City, Herts, AL7 1TW <a href="http://www.vega.co.uk">www.vega.co.uk</a>
Andrew Hide	Senior consultant	LogicaCMG	E: <a href="mailto:andrew.hide@logiacmg.com">andrew.hide@logiacmg.com</a> T: 1372 759121 M: 7866 560239 The Office Park, Springfield Drive, Leatherhead, Surrey, KT22 7LP <a href="http://www.logica.co.uk">www.logica.co.uk</a>
Iain Le Duc	Technical Directorate	SciSys	T: 01249 466468 E: <a href="mailto:Iain.le.Duc@scisys.co.uk">Iain.le.Duc@scisys.co.uk</a> Methuen Park, Chippenham, Wiltshire, SN14 0GB <a href="http://www.scisys.co.uk">www.scisys.co.uk</a>
Peter Rice		European Bioinformatics Institute	T: 01223 492569 E: <a href="mailto:pmr@ebi.ac.uk">pmr@ebi.ac.uk</a> European Bioinformatics Institute, Wellcome Trust Genome Campus, Hinxton, Cambridgeshire, CB10 1SD <a href="http://www.ebi.ac.uk">www.ebi.ac.uk</a>
David Palmer	David Palmer, Business Group Manager, Distributed Technology Group	QinetiQ	David Palmer T: 01684 896019 M: 07980 225761 E: <a href="mailto:wdpalmer@qinetiq.com">wdpalmer@qinetiq.com</a> Malvern Technology Centre, St Andrews Road, Malvern, WR14 3PS <a href="http://www.qinetiq.com">www.qinetiq.com</a>
Harry Makatsoris		Orion Logic	<a href="mailto:h.makatsoris@orionlogic.com">h.makatsoris@orionlogic.com</a> T: 020 7229 6476 107 Inverness Terrace, London, W2 6JH <a href="http://www.orionlogic.com">www.orionlogic.com</a>
Paul Perkins		ATOS KPMG Consulting Limited	<a href="mailto:Paul.Perkins@AtosKPMGConsulting.co.uk">Paul.Perkins@AtosKPMGConsulting.co.uk</a> +447776 201763 19th Floor, One Canada Square, Canary Wharf, London

## 6.2 “About UK DTI Missions”

### ***Excerpt from Mission Introductory document***

"Global Watch Missions are visits overseas by small groups of technical experts from UK companies and academia to top-performing technology organisations characterised by excellence in the relevant field. Planned and managed by a UK coordinating organisation, with guidance and financial support from the DTI's Global Watch Missions team, missions are mounted to inform and influence hightech UK industries in four broad fields: electronics and Information & Communication Technology (ICT), life sciences, performance engineering and energy and the environment. The findings are compiled into a report by the mission participants, which is made available. It is expected that the mission will facilitate a two-way exchange of information and will enhance the potential for co-operation between UK and international organisations."

### 6.3 Programme of the visit

## DTI International Technology Service-GlobalWatch Mission “Mission to CERN in Distributed IT Applications”

**Programme**  
V16 – F. Fluckiger

Monday 28 <sup>th</sup> June 2004						
Time	Orga nizer	Theme	Topic	CERN speakers / participants	Min	Place
08:30-09:00	N. Hill	Welcome Presentation of Mission by Mission Leader	Welcome Presentation of Mission by Mission Leader	NA	30	Bd 61, Room B
09:00-10:00	ETT	Presentation of CERN	Introduction to CERN and TT	Maximilian Metzger Jean-Marie le Goff	60	
10:00-12:00	ETT	Visit of Atlas	Organized by ETT Unit	NA	120	Atlas site
12:00-13:15	ETT	Lunch	Organized by ETT Unit CERN Participants tbc by ETT	Roberto Amendolia François Fluckiger Jean-Marie le Goff, Maximilian Metzger Marilena Streit Bianchi Wolfgang von Rüden	75	Main Restaurant Glass Box
13:15	IT	Transport to Building 513	Organized by IT			
13:30-15:45	ETT	ETT related activities and projects	IP issues in TT at CERN	Robert Abbott	20	openspace Room 513-R-070
			The Mammogrid project	Roberto Amendolia	30	
			CRISTAL: A process and data management systems. A spinout from the CMS experiment	P. Bayle CEO of AGILIUM	30	
			TT through procurement activities study	Marilena Streit-Bianchi	20	
			Discussion	Those above	30	
15:45-16:00	IT	Coffee Break		NA	15	openspace
16:00-17:30	IT	IT Department (General) Procurement	IT Department: mission, goals, skills	Wolfgang von Rüden	15	openspace Room 513-R-070
			General services and Administrative Computing	John Ferguson	15	
			Technology Transfer in IT	François Fluckiger	10	
			CERN procurement principles	Anders Unnervik	20	
			Discussion	Those above + François Grey	30	
18:30	N. Hill	Reception at British Consulate	Transport organized by N. Hill	NA		British Consulate

Tuesday 29 <sup>th</sup> June 2004						
Time	Organizer	Theme	Topic	CERN speakers / participants	Min	Place
08:30-10:30	IT	The LHC Computing Grid and the CERN openlab	Introduction to Physics Computing	Les Robertson	10	openspace
			The LCG (incl. timeline for procurement)	Les Robertson	20	
			openlab (overview)	François Fluckiger	15	
			openlab (technical)	Sverre Jarp	15	
			Discussion	Those above + John Ferguson Wolfgang von Räden	60	
10:30-10:45	IT	Coffee Break		NA	15	openspace
10:45-12:45	IT	Grid technologies and EGEE	EGEE (overview)	Robert Jones	15	openspace
			Grid Middleware	Robert Jones	15	
			Grid Deployment	Ian Bird	15	
			Grid Security	Ian Neilson	15	
			Discussion	Those above + John Ferguson Wolfgang von Räden	60	
12:45-13:30	IT	Lunch	(sandwiches and refreshment)	NA	45	openspace
13:30-14:30	N. Hill	Visitors Closed meeting		NA	60	openspace
14:30-15:30	IT	Storage and data Management Technologies	Grid Data Management	James Casey	10	openspace
			Databases and Pool	Jamie Shiers	10	
			CASTOR	Olof Barring	10	
			Discussion	Those above	30	
15:30-15:45	IT	Coffee Break				openspace
15:45-17:30	IT	Innovative General and Administrative Computing	Innovative Desktop services (including NICE, web, print, anti-spam services)	Alberto Pace	15	openspace
			Workflow solutions, EDH and E-commerce	Derek Mathieson or James Purvis	10	
			Collaborative Project Management Tools (EVS)	Jurgen de Jonghe	10	
			Summarized overview of AIS activities	R. Martens	10	
			Document Management: CDS and InDiCo	Jean-Yves le Meur / Mick Draper	10	
			Discussion	Those above + John Ferguson	50	
17:45-18:45	IT	Visit of IT Computer Centre / Social Time				CC, Bd 513
18:45	N. Hill	Transport to Restaurant				
19:00	IT	Dinner at restaurant Au Renfort (in Sézegnin)		CERN John Ferguson François Fluckiger John Harvey Jean-Marie le Goff Les Robertson Marilena Streit-Bianchi Pierre Vande Vyvre Wolfgang von Räden		Au Renfort Sézegnin



Wednesday 30th June 2004						
Time	Orga nizer	Theme	Topic	CERN speakers / participants	Min	Place
08:30-10:30	PH/ SW	Physics Software Session coordinated by <a href="#">John Harvey</a>	Introduction to Physics Software (requirements, basic applications, spectrum of components)	<a href="#">Pere Mato Vila</a>	15	openspace
			Geant4	<a href="#">John Apostolakis</a>	15	
			Root- Proof	<a href="#">René Brun</a>	15	
			Software Engineering (code and release management, external libraries, testing processes and tools)	<a href="#">Alberto Aimar</a>	15	
			Discussion	<a href="#">Those above</a>	60	
10:30-10:45	IT	Coffee Break		NA	15	openspace
10:45-12:45	PH/ Alice	Physics on-line technologies: the ALICE experiment Session coordinated by <a href="#">Wisla Carena</a>	Challenges of Data Acquisition at the LHC	<a href="#">Pierre Vande Vyvre</a>	30	openspace
			Evaluation of computing technologies for the ALICE data acquisition	<a href="#">Klaus Schossmaier</a>	20	
			Electronics integration of the ALICE Pixels tracking detector	<a href="#">Alex Kluge</a>	20	
			Discussion	<a href="#">Those above + Wisla Carena Fabio Formenti</a>	50	
12:45-13:30	IT	Lunch	(sandwiches and refreshment)	NA	45	openspace
13:30-14:30	N. Hill	Visitors Closed meeting		NA	60	openspace
14:30-15:30	IT	High Performance Networking	High Performance LAN Networking	<a href="#">Jean-Michel Jouanigot</a>	15	openspace
			High Performance WAN Networking	<a href="#">Olivier Martin</a>	15	
			Discussion	<a href="#">Those above</a>	30	
15:30-15:45	IT	Coffee Break			15	openspace
15:45-16:30	N. Hill	Concluding Session		From IT Dpt <a href="#">John Ferguson</a> , <a href="#">François Fluckiger</a> , <a href="#">François Grey</a> , <a href="#">Wolfgang von Rüden</a>  Other Dpt tbc	45	openspace
16:30	N. Hill	Departure to airport				

## 6.4 List of CERN participants

Director General's Office			
Name	Function	Group	e-mail
Maximilian Metzger	Secretary General	SG-DI	maximilian.metzger@cern.ch

SG / ETT Unit Participants			
Name	Function	Group	e-mail
Jean-Marie Le Goff	Technology Transfer Service Group Leader	ETT-TT	jean-marie.le.goff@cern.ch
Marilena Streit Bianchi	TT Operations, Section Leader	ETT-TT	marilena.streit-bianchi@cern.ch
Roberto Amendolia	TT Promotions, Section Leader	ETT-TT	salvator.amendolia@cern.ch
Nelly Castilla	TT Promotions, group member	ETT-TT	nelly.castilla@cern.ch

IT Department Participants			
Name	Function	Group	e-mail
Wolfgang von Rüden	Department Head	IT-DI	wolfgang.von.rueden@cern.ch
John Ferguson	Deputy Department Head	IT-DI	john.ferguson@cern.ch
Les Robertson	LCG Project Leader	IT-LCG	les.robertson@cern.ch
François Fluckiger	Technology Transfer Officer / Manager of the openlab / Director of CERN School of Computing	IT-DI	francois.fluckiger@cern.ch
Reinoud Martens	Administrative Information Services (AIS) Group Leader	IT-AIS	reinoud.martens@cern.ch
Jamie Shiers	Databases (DB) Group Leader	IT-DB	jamie.shiers@cern.ch
Tony Cass	Fabric Infrastructure and Operations (FIO) Group Leader	IT-FIO	tony.cass@cern.ch
Ian Bird	Grid Deployment (GD) Group Leader/LCG Deployment Area Manager & EGEE Operations Manager	IT-GD	ian.bird@cern.ch
Alberto Pace	Internet Services (IS) Group Leader	IT-IS	alberto.pace@cern.ch
Mick Draper	User and Document Services (UDS) Group Leader	IT-UDS	mick.draper@cern.ch
François Grey	Strategy and Communications Officer	IT-DI	francois.grey@cern.ch
Robert Jones	Technical Director, EGEE project	IT-EGE	robert.jones@cern.ch
Olof Barring	Architecture and Data Challenges (ADC) Group Member, CA section	IT-ADC	olof.barring@cern.ch
Derek Mathieson	Administrative Information Services (AIS) Group, EB Section Leader	IT-AIS	derek.mathieson@cern.ch
James Purvis	Administrative Information Services (AIS) Group, Deputy Group Leader and FLP Section Leader	IT-AIS	james.purvis@cern.ch
Jurgen de Jonghe	Administrative Information Services (AIS), PM Section Leader	IT-AIS	jurgen.de.jonghe@cern.ch

Jean-Yves Le Meur	User and Document Server (UDS) Group, CDS Section Leader	IT-UDS	jean-yves.le.meur@cern.ch
Jean-Michel Jouanigot	Communication Systems Group, Campus Network Leader	IT-CS	jean-michel.jouanigot@cern.ch
Olivier Martin	Communication Systems Group, EU Data Tag Project Leader, External Networks Leader	IT-CS	olivier.martin@cern.ch
James Casey	GRID Deployment Group member, GIS section	IT-GD	james.casey@cern.ch
Ian Neilson	GRID Deployment Group member, GIS section,  LCG Security Officer	IT-GD	ian.neilson@cern.ch

#### FI Department Participants

Name	Function	Group	e-mail
Anders Unnervik	Purchasing & Industrial Services Group Deputy Group Leader	FI-PI	anders.unnervik@cern.ch

#### PH Department Participants

Name	Function	Group	e-mail
John Harvey	Software Development for Experiments (SFT) Group Leader	PH-SFT	john.harvey@cern.ch
Pere Mato Vila	Software Development for Experiments Experiments (SFT) Group Member	PH-SFT	pere.mato@cern.ch
John Apostolakis	Software Development for Experiments Experiments (SFT) Group Member	PH-SFT	john.apostolakis@cern.ch
René Brun	Software Development for Experiments Experiments (SFT) Group Member	PH-SFT	rene.brun@cern.ch
Alberto Aimar	Software Development for Experiments Experiments (SFT) Group Member	PH-SFT	alberto.aimar@cern.ch
Wisla Carena	ALICE Trigger/DAQ (AID) Group, Group Leader	PH-AID	wisla.carena@cern.ch
Pierre Vande Vyvre	ALICE Trigger/DAQ (AID) Group Member	PH-AID	pierre.vande.vyvre@cern.ch
Klaus Schossmaier	ALICE Trigger/DAQ (AID) Group Member	PH-AID	klauss.schossmaier@cern.ch
Fabio Formenti	Electronic Design (ED) Group Leader	PH-ED	fabio.formenti@cern.ch
Alex Kluge	Electronic Design (ED) Group Member	PH-ED	alex.kluge@cern.ch

## 6.5 List of documents distributed to delegates

- Full programme
- Handouts of Technical presentations
- Technology Transfer in the IT Department – report for the year 2003
- Full list of CERN participants with function and contact data
- List of useful Web links (to CERN sites relevant to the visit)
- Guiding Principles of the openlab for DataGrid Applications
- Copy of Press Release “CERN recognizes UK’s outstanding contribution to Grid computing”

All these documents are available from the web site dedicated to the DTI mission visit, part of the IT-TT site (<http://cern.ch/it-tt>).