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Minutes of the 1st COLLABORATION BOARD Meeting

(Held at CERN on 3rd February 2006)

Present:

CERN CSO	J. Engelen
CERN IT Dept. Head	W. Von Rueden
CERN PH Deputy Dept. Head	M. Doser
Scientific Secretary	D. Jacobs
LCG Project Leader	L. Robertson
LHC Experiment Spokespersons	
ALICE	J. Schukraft
ATLAS	S. Stapnes (for P. Jenni)
CMS	M. Della Negra
LHCb	T. Nakada
International Membership	
Canada, TRIUMF	M. Vetterli (*phone*)
Czech Rep., FZU AS, Prague	M. Lokajicek
France, CC-IN2P3	F. Malek
France, CC-IN2P3 AF	
France, GRIF, Paris	J.P. Meyer
France, LPC, Clermont-Ferrand	D. Pallin (*phone*)
France, SUBATECH, Nantes	L. Aphecetche (*phone*)
Germany, ATLAS Federation, Munich	S. Bethke
Germany, DESY, Hamburg	V. Gülzow
Germany, CMS Federation	
Germany, GSI, Darmstadt	P. Malzacher
Germany, GridKa	K.-P. Mickel
Italy, CNAF	L. Dell'Agnello (for M. Mazzucato) (*phone*)
Italy, INFN Tier-2 Federation	P. Capiluppi
Japan, ICEPP, Tokyo	I. Ueda (for H. Sakamoto)
Pakistan, Pakistan Tier-2 Federation	H. Hoorani
Poland, Polish Tier-2 Federation	R. Gokieli.
Romania, Romanian Tier-2 Federation	M. Dulea
Russian Fed., Russian Data-Intensive GRID (RDIG)	V. Ilyin
Spain, ATLAS Federation	J. Salt
Spain, CMS Federation	F. Matorras (*phone*)
Spain, LHCb Federation	J.J. Saborido Silva (for R. Graziani Diaz)
Spain, PIC	M. Delfino
Switzerland, CSCS	F. Orellana / C. Grab (*phone*)
UK, London Tier-2	D. Colling
UK, NorthGrid	R. Jones
UK, RAL	J. Gordon / N. Geddes (*phone*)
UK, SouthGrid	J. Tseng (*phone*)
USA, Midwest ATLAS T2 Federation	R. Gardner (*phone*)
USA, Florida CMS T2	R. Cavanaugh (for P. Avery)
USA, UNL Nebraska CMS T2	D. Swanson (*phone*)
USA, Purdue CMS T2	N. Neumeister
USA, UC San Diego CMS T2	F. Wuerthwein (*phone*)

In Attendance

LCG Resource Coordinator	C. Eck
Poland	M. Turala

Excused

Australia, Univ. of Melbourne	
China, IHEP, Beijing	G. Chen
India, TIFR, Mumbai	A. Gurtu
India, VECC/SINP, Kolkata	Y.P. Viyogi
Netherlands, NIKHEF/SARA	K. Bos
Nordic Data Grid Facility (NDGF)	B. Vinter
Taipei, ASGC	S. Lin
Taipei, Taiwan AF Federation	
UK, Scotgrid	N. Glover
USA, BNL	B. Gibbard
USA, Boston/Harvard ATLAS T2 Federation	J. Shank
USA, Southwest ATLAS T2 Federation	K. De
USA, FNAL	V. White
USA, Caltech CMS T2	H. Newman
USA, MIT CMS T2	C. Paus
USA, U. Wisconsin CMS T2	S. Dasu

1st Meeting of the WLCG Collaboration Board (CB), 3 February 2006

Documents can be found at: WLCG CB Home Page

1. Introduction

CERN CSO J. Engelen

Acting as Chairman for this first meeting, J. Engelen welcomes delegates. He notes that, in addition to the representatives of Tier-1 and Tier-2 centres who are present, there are others participating by telephone.

He recalls that the purpose of the Collaboration Board (CB), defined in the WLCG MoU (CERN-C-RRB-2005-01/Rev.) is to control the project and guide the project leader. The CB represents the views of the various centres or federations of centres. At the same time, its function is clearly NOT to manage the project on a day-to-day basis. There are other (executive) bodies for this, as will be shown by the Project Leader in his presentation.

In addition the whole project is watched over technically by the LHC Committee (LHCC), which has been instrumental in setting up the LCG project from the point of view of the scientific programme. The LHCC reports to the CERN Director General through the CSO and J. Engelen promises to pass on to the CB any relevant information arising from this channel.

Similarly, the Computing Resources Review Board (C-RRB) comprises the representatives of the WLCG funding agencies and watches over the resource aspects of the project in a manner analogous to the RRB's of the LHC experiments.

2. Members introduce themselves and the organization that they represent

All of those around the table and on the telephone introduce themselves.

3. Election of the CB Chair

In November 2005 J. Engelen set up a search committee (N. Geddes, J. Huth, M. Kasemann, co-ordinated by D. Jacobs) to identify candidates for the post of Chairperson of the CB. When N. Geddes learned that his name was being put forward for the post, he naturally stood down from the search committee, which finally identified three candidates: M. Delfino, N. Geddes, and F. Malek. The three candidates confirmed their availability.

The election now takes place by simple majority of the voting members of the CB (one member – one vote), both those physically present (paper ballot) and those participating by telephone and having registered with D. Jacobs to vote (email to D. Jacobs). In both cases the vote is anonymous. The voting membership of the CB is defined in the WLCG MoU.

Following the vote counting, J. Engelen announces that N. Geddes has obtained the greatest number of votes and is thus elected Chairperson of the CB for the coming two years. N. Geddes thanks members for the confidence they have shown in him and apologises for his absence at this meeting. On the proposal of M. Delfino, the CB **congratulates** N. Geddes on his election (applause).

It is agreed that J. Engelen will continue to chair the present meeting. N. Geddes will chair the subsequent two annual meetings of the CB (and any intermediate ones). As

Chairperson, he will be an ex-officio member of the WLCG Overview Board during the coming two years.

N. Geddes will also become the CB representative of the UK, RAL centre (J. Gordon is present in that role for this meeting).

4. Status of the Project

Project Leader L. Robertson
Presentation Project Status Report

- Introduction

L. Robertson first recalls the organizational structure of the WLCG, pointing out the two independent review bodies (LHCC and C-RRB) and the strategic committees (the CB and its standing sub-committee the Overview Board (OB)). At the executive level, the main committee is the Management Board (MB), chaired by himself and comprising the computing coordinators of the experiments, one person from the Tier-0 and each Tier-1 site, the chairman of the Grid Deployment Board, the area managers who operate specific areas of the project and the EGEE Technical Director. The MB forms the executive base of the project and the Activity Areas report into it. There are in addition two other main technical bodies in which much decision-taking happens:

– the Architects Forum (AF) chaired by P. Mato and comprising the experiment software architects along with the LCG Applications Area Manager and the various Applications Area project mangers;
– the Grid Deployment Board (GDB) chaired until end-September by K. Bos. This has a voting membership comprising one person from a major site in each country and one person from each experiment. It is in addition attended by the experiment Computing Coordinators, site service management representatives, and the LCG Project Leader and Area Managers. In practice the GDB has only ever voted once (for the Chair) and normally works by consensus. The meetings are often attended by other persons – coordinators etc.. It is a truly technical meeting, the focus of which changes with time, early-on featuring topics such as usage of certificates and now focussing on the Service Challenges. It has one standing working-group for Service Challenges, while another looks at the design of the Tier-0 – Tier-1 network.

At the moment, much of the detailed information about the project exists on Wikis – a medium which works well for those involved but is less good for others. L. Robertson invites input from the CB on this matter.

All of the Boards except the OB have open access to agendas, minutes and documents, available from the WLCG home page: http://www.cern.ch/lcg (although for some it is necessary to identify yourself by giving a CERN account name/password). The home page also has links to the project planning and milestone information. L. Robertson invites feedback on what information it is desirable to make available in this way.

LCG depends on two major science grid infrastructures: EGEE and OSG. These are separately managed and funded infrastructures, the situations of which have also been evolving, resulting in some confusion.

- MoU signature status

Two funding agencies have already signed the WLCG MoU – Taipei and Pakistan. Nine others are ready to sign and the documents will be dispatched within weeks – China, France, Germany, Romania, Russia, JINR Dubna, Spain, Netherlands and USA. For the others the situation is unknown. L. Robertson encourages members to discuss the matter with their funding agencies and invites comment.

- Canada: M. Vetterli reports that there was a funding review on 23 January. He expects that the final funding situation will be known by mid-March.
- Czech Rep.: M. Lokajicek feels that the situation there should be known by March.
- Italy: P. Capiluppi hopes that the funding can be defined within 1-2 months and the MoU then signed for both the Tier-1 and the Tier-2 Federation.
- Japan: I. Ueda reports that Japan will be ready to sign in April.
- Nordic Data Grid Facility: L. Robertson has heard that the organisation of the NDGF should be defined in a few weeks.
- Poland: R. Gokieli recalls that there have been big changes in the structure of science funding in Poland. He hopes that the situation will be clear in a few months.
- Romania: M. Dulea confirms that Romania is ready now to sign the MoU.
- Switzerland: F. Orellana says there is no clear information but he would expect to be ready by March.
- UK: N. Geddes reports that PPARC is currently reviewing the follow-on from GridPP. The outcome should be clear in about 2 months and the UK will probably then be in a position to sign the MoU in May-June.

- Reporting and Monitoring

A new planning, reporting and monitoring process was established in December. According to this process, the formal plans are agreed by the MB under five headings: WLCG High Level Phase2, Applications Area, Deployment Area, Fabrics Area (Tier-0) and Tier-1 site milestones. The inclusion of the last heading is the major change compared with past practice. This was all established by the end of 2005 and it is now necessary to add the experiments (how they plan to participate in the SC's) and the Tier-2 sites.

Although the planning information is now quite voluminous, it is a reasonably simple system. Reporting is then done against the plan. The reports will be reviewed by A. Aimar (LCG Planning Officer) and two other assessors, who will provide summary reports for the MB and OB. This activity is just getting started. Pointing out that all of the planning information is on a Wiki, L. Robertson shows examples of the planning pages, presently available for the CERN fabric and for the Tier-1's. In adding the information for the Tier-2's, it will be desirable to arrange the large number of centres concerned into some sort of structure, rather than simply a flat set of entries.

N. Geddes asks if, from the perspective of the MB, any weaknesses have been seen that need improving. L. Robertson responds that it is difficult as yet to see how the process is working, since it is only in its first round. The most important aspect now is to include the Tier-2 planning. The CB could help in this by thinking about some appropriate reporting structure, in order to avoid a very large number of uncoordinated reports.

- Service Challenges

The overall chart of LCG service deadlines assumes that the service must be ready on 1 April 2007. In order to achieve this, the target is to be running a continuous service by 1 October 2006 – an important milestone for getting in place the necessary support, staffing and monitoring arrangements, all of which take time to develop and set-up. To help to get to this target, it is aimed to run a pilot stable service (Service Challenge 4 – SC4) from 1 June, giving a training period before the continuous service starts.

L. Robertson recalls that the purpose of the Service Challenges is threefold: to understand what it takes to run a real grid service for days and weeks at a time; to promote and verify the planning and deployment of the Tier-1's and the large Tier-2's (testing this

with realistic usage patterns) and to get the essential grid services ramped-up to target levels of reliability, availability, scalability and end-to-end performance.

This work has been divided into four steps:

- SC1 at the end of 2004 focused on data transfer to a subset of Tier-1's. The achieved transfer rate was slow and not many people were involved;
- SC2 (spring 2005) went well. It included mass storage, and all Tier-1's and a few Tier-2's participated.
- SC3 (2H2005) included the Tier-1's and more than 20 Tier-2's, with a first set of baseline services. It showed up early performance issues from which the lesson has been learned so that it can be hoped to do much better in SC4. There has also been an element of learning what it is realistic to depend on. There was a very successful re-run of SC3 at the end of January, for which stable operation was quickly achieved. Much work had gone into mass storage and tuning since SC3, and the re-run showed that all sites were now running smoothly.
- SC4 will exercise the experiments' full production chains, from DAQ through Tier-0 to the Tier-1's. It will also be necessary during this period to set up the distributed database services that are needed. The aim is to verify that the performance is ramping-up as expected and real practical service metrics must be devised (as against the theoretical ones in the MoU). The exercise will also serve to activate the Tier-1 centres – a big job. The approach must be more realistic than was the case for SC3, acknowledging the longer time that is actually needed to get from working code to deployed production. SC4 will thus be evolutive in nature, starting from the functionality that has been deployed for SC3. With the target of having the whole service ready to start at end-May, the middleware to be used must be available to sites by end-April. The six weeks prior to that will be occupied by a beta test for the components (in order to avoid the trap of trying to test the components and the experiments' software at the same time). A new draft plan for SC4 is being discussed in preparation for the Mumbai workshop, for which 150 people have registered. By the end of the workshop it is hoped to have a basic plan to be passed to the GDB and finalised in the MB by end-February.

In the medium term beyond SC4 it is necessary to consider what elements will not be in SC4 but must be ready for October. The main items are 3D distributed database services (will still be undergoing development and test), SRM 2 (for which there are 3-4 new implementations to be tested and a plan to be elaborated) and new functionality, some of which is already being developed (need to reach agreement on content, then test and deploy). EGEE development goes on under an EGEE-led coordination group but there is little time left and so LCG will probably not be using anything that is not already being worked on. This last point will not be settled by end-February.

P. Capiluppi asks what new functionality will become available after October. L. Robertson replies that a clear separation is needed between production targets and new activities that require exploration and review.

H. Hoorani receives confirmation that the time-line is the same for both Tier-1 and Tier-2 sites.

Remarking that the presentation has concentrated on the service side, M. Delfino points out the need also to consider what the experiments will run on this service and asks about the plans for (e.g.) distributed analysis. L. Robertson replies that the experiments will be testing their software during SC4. One day of the Mumbai workshop is devoted to the experiments' plans, to which site representatives will be responding. In issues like distributed analysis, the more information that is available from the experiments the better.

At the same time, care must be taken not to make the plan too complex. The emphasis will be on first getting to SC4 and then seeing what problems arise. Problems should not be allowed to impact the stable service and every effort will be made to avoid changing the service continuously, since it would then be hard for everyone then to know what the priorities are. Nevertheless, serious problems will of course have to be tackled.

M. Della Negra states that, based on SC4, the intention of CMS is to go to a complete 50 Hz test of the full system.

M. Delfino feels that the OB can contribute in the feedback process and in re-scoping. One should not immediately set up parallel structures if it seems that a particular need cannot be met.

- Accounting for both remotely and locally submitted work: problems of introduction

An accounting mechanism, which extracts information from the sites, has been in the plan now for more than one year, run by the Grid Operations Centre at RAL. A recent check of the figures for October-January shows, however, that there seem to be few CPU's in use at many places, having no relation to the number declared to be available. Thus it seems that, although the mechanism is in place, little correct information is being entered into it as yet. There are some obvious gaps in reporting, since some sites currently only report figures once per month. There are also some sites that report only work submitted through the Grid, whereas reports made for the C-RRB should show all resources being used for LHC, also the locally submitted work. The OB considers that all work should be reported. This will require effort, not only for the reporting but also for normalisation of the figures, and L. Robertson stresses the need for input from the people who own the resources. The CB **concurs** with the importance of this topic and the need to report all use of resources for LHC.

M. Turala remarks that he spoke on this topic at the C-RRB. He sees sometimes the resources available not being used by the VO's. For this reason sites should also report for the funding agencies the resources that were available.

- Summary and discussion

Summarising, L. Robertson repeats that the CB must consider what information it would like to receive. He also asks members to give active encouragement to the funding agencies to sign the MoU. He stresses the need for all sites to plan their integration in SC4. Although an accounting system is available, there are as yet serious problems with the data being entered into it. SC4 will be critical for the validation of the service so that, by end-September, all of the underlying grid services can be in continuous, reliable operation. First real data will arrive in one year and it is essential to have an integrated and reliable service well ahead of first beam. Things cannot be delayed for later.

Commenting on the fact that LCG relies on EGEE resources, M. Turala asks about the long term future of this project. W. Von Rueden replies that he has proposed to the EC to set up a long term infrastructure, targeted at the specific community, in the context of the 7th Framework, under the chapter called Research Infrastructure (which is distinct from the R&D projects). It is now necessary to get this included in the roadmap. It is important to get national organizations to buy into the idea. At best the new infrastructure can only be set up starting from mid-2007 and so another proposal (under the R&D chapter) for a 3rd round of EGEE will probably be submitted as a bridging measure. J. Engelen comments that a similar answer is clearly needed from OSG.

Closing this item, J. Engelen underlines the importance of not only getting signatures on the WLCG MoU but also actually making available the expected resources.

5. Round-table from the Centres on the expected ramp-up of human and hardware resources

N. Geddes draws the attention of speakers to the need, in their presentation of resources, to point out any problems so that the CB can have the opportunity to act to help.

(In the interests of brevity, these minutes do not reproduce the full contents of each speaker's overheads and rather only record additional information given and subsequent discussion).

5.1. Canada, TRIUMF

M. Vetterli
Presentation Canada

5.2. Czech Rep., FZU AS, Prague

M. Lokajicek
Presentation Czech Rep.

The actual CPU power (kSI2k) available this year is 220, somewhat more than shown in the plan. Only the 2006 resource figures are firm, those for later years being simply planning numbers.

5.3. France, CC-IN2P3

F. Malek
Presentation France, CC-IN2P3

Computing for LHC in France is organised onto a Tier-1 centre and Analysis Facility (at CC-IN2P3), three Tier-2 Federations and a number of Tier-3's. From 2009 onwards the resources provided for LCG will represent 80% of CC-IN2P3's activities. As for the Czech Rep., only the 2006 funding is granted at this stage. The situation regarding effort is satisfactory until the end of 2007. After this there is a large uncertainty due to dependence on EGEE-2 funds.

5.4. France, GRIF, Paris

J.P. Meyer
Presentation France, GRIF

This distributed Tier-2 will function as a single unit. The initial resource planning runs to 2007. A slower ramp-up of resources is presently being studied in view of the prediction that the initial LHC Luminosity will be lower than originally expected. Despite this, there is a clear problem with materials funding for 2008 and after. In addition to the present 9 FTEs of effort, it is hoped to obtain two more via EGEE-2.

C. Eck receives confirmation that the resource plan now shown should replace the figures that were until now in the WLCG MoU.

5.5. France, SUBATECH, Nantes

L. Aphecetche
Presentation France, SUBATECH

It is hoped to achieve a ramp-up of resources that is steeper than shown presently in the WLCG MoU. Already this year 28 kSI2k of cpu is available compared with the 20 kSI2k in the MoU. There is good hope that the resource figures marked "optimistic" can in fact be achieved.

5.6. France, LPC, Clermont-Ferrand

D. Pallin
Presentation France, LPC

The funding for this Tier-2 comes mainly from regional sources. Firm planning for the years after 2007 can only be made when a new funding plan is available.

5.7. Germany, GridKa *K.-P. Mickel*
Presentation Germany, GridKa

The capacity promised in the WLCG MoU for 2006 will be available in a few months. Although the manpower plan shows steady growth through to 2009, there is some uncertainty on this, since eight of the people are funded by EGEE.

5.8. Germany, ATLAS Tier-2 Munich *S. Bethke*
Presentation Germany, ATLAS T2 Munich

This common site of the Leibnitz Rechenzentrum München and the IPP/MPG Rechenzentrum Garching is located on the Garching campus. Although the Ludwig Maximilians University is ready to sign the MoU, the funding is in fact not fully secured.

5.9. Germany, DESY, Hamburg *V. Gülzow*

DESY provides a Tier-2 for ATLAS and is member of a Tier-2 Federation for CMS that includes RWTH Aachen. The funding for Aachen is not yet secured and the resource figures presently in the WLCG MoU represent only those provided by DESY. The work to set up the Tier-2 is in progress and already the infrastructure is satisfactory. In fact slightly more resources are now available then were pledged in the MoU for this time. Funding for this year is satisfactory. The local communities have been asking about the plans to ramp-up resources in the period before LHC start-up. V. Gülzow is rather confident that MC production capacity can be provided during this time for both CMS and ATLAS, and it is also intended to participate in the Service Challenges. He confirms to J. Engelen that the intention is to expand the site to serve the rest of the DESY scientific programme, several aspects of which are already supported.

5.10. Japan, ICEPP, Tokyo *I. Ueda*
Presentation Japan, ICEPP

The main constraint at present is the lack of human resources (in fact only 3 FTE's are currently available, rather than the 3.5 shown). The hardware resource planning is as in the WLCG MoU. The capacity foreseen for 2006 will be available very soon. The budget is assured through 2009.

5.11. Romania, Romanian T2 Federation *M. Dulea*
Presentation Romania

The Romanian Tier-2 Federation comprises four main institutes – NIPNE, ISS, UPB and IIMT – along with ICI. NIPNE makes some of its capacity available to all the experiments. Beyond this, NIPNE and UPB both serve ALICE, ATLAS and LHCb, while ISS serves ALICE and IITM serves ATLAS. The funding comes from research projects and so no budget projections can be made. Nevertheless the resource figures shown are considered to be safe to around 2008. Manpower is a problem and the overheads that result from to distribution over five sites do not help in this respect.

5.12. Russian Fed., Russian Data-Intensive Grid *V. Ilyin*
Presentation Russia, RDIG

RDIG brings together a large federation of institute sites to offer Tier-2 functionality to all four experiments with equal priority, based on the experiments' computing models. The detailed distribution of work will of course not be flat. The planned storage somewhat exceeds that for a normal Tier-2, due to the desire to offer some Tier-1 functionality. RDIG will operate in the context of EGEE. It is planned to run a Grid Operations Centre in Russia.

Concerning connectivity, a GEANT2 PoP opened in Moscow last autumn. This presently supplies two 622 Mbps links and the capacity can be upgraded in the future.

5.13. Spain, PIC *M. Delfino*

The funding request has been submitted, all for hardware since there already is a human resource scenario with about 18 people, two thirds of whom are counted against the Tier-1 activity. It appears that two thirds of the funding has been granted, although there is some ambiguity because projects run December-December. The situation is being clarified with the Ministry. Meanwhile PIC is maintaining the pledged resources for 2008 but is discussing a less aggressive ramp-up than hitherto foreseen.

5.14. Spain, ATLAS Federation *J. Salt*
Presentation *Spain, ATLAS Fed.*

Four groups are involved. For 2007 it seems that only about 50% of the requested funding will be available from the national HEP programme (two thirds at best). This can, however, be topped-up with local resources so that 90% of the planned Tier-2 capacity will be achieved by 2008. After 2008 it is supposed for now that the same ramp-up rate can then be maintained through 2012. Only about 60% of the needed manpower is available. For the rest it is thought to rely on help from the technical staff of the institutes.

5.15. Spain, CMS Federation *F. Matorras*
Presentation *Spain, CMS Fed.*

The Spanish CMS Tier-2 Federation aims to contribute about 5% of the CMS Tier-2 resources. The funding situation is as for the other Spanish sites. The manpower needs have not yet been firmly defined.

5.16. Spain, LHCb Federation *J.J. Saborido Silva*
Presentation *Spain, LHCb Fed.*

This Tier-2 Federation for LHCb comprises two institutes. So far 75% of the resources needed through 2007 have been granted and efforts continue to obtain the rest. CB members query the very small amount of disc capacity planned – 0.9 TB in 2007 and 1.49 TB in 2008.

5.17. USA, UNL Nebraska CMS T2 *D. Swanson*
Presentation *USA, UNL CMS T2*

It is planned to have 40% of the pledged capacity available in 2006 and to reach the MoU goals in 2007. Concerning effort, it has been possible to survive by "borrowing" local people. A possible problem is foreseen with the rate of job submission in OSG. There is a growing HEP faculty at UNL. At present about 55% of the centre's capacity is devoted to LHC. The other 45% of the work is locally submitted at UNL.

5.18. UK, RAL *J. Gordon*
Presentation *UK, RAL*

The UK is investing 35 MGBP in GridPP through 2007. The necessary GridPP support team is now in place. The UK has already been participating in the Service Challenges and the necessary funding is in place to end-2007. The forward look beyond this is presently that there will be no large increase in funds. The scheme for allocating UK capacity to the experiments is being worked on and is based on the UK's share in the experiments worldwide. Concerning connectivity, a 10 Gbps light-path to CERN should be established this year. All of the resource plans have already been transmitted to C. Eck. There is some

concern at present that the proposed split between Tier-1 and Tier-2 capacity may not be correct (too much capacity in the Tier-2's for the computing models of some experiments).

5.19. UK, NorthGrid *R. Jones*
Presentation UK, NorthGrid

NorthGrid has already been delivering quite a lot of resources. The capacity will shortly be ramped-up, after which it will remain rather constant. For funding, much reliance is being placed on the forthcoming mid-2006 PPARC call but other potential funding sources are also being investigated. The staffing is funded by GridPP, with additional reliance on local effort supplied on a goodwill basis. A current problem is that one half-post is not proving as effective as was hoped for.

5.20. UK, London Tier-2 *D. Colling*
Presentation UK, London Tier-2

The London Tier-2 is distributed over five sites. These run a mix of dedicated resources for LCG and a shared university computer cluster. The institutes are involved in ATLAS, CMS and LHCb, and it is these experiments that are served. The resource plan is as already stated in the WLCG MoU. Although the agreements for staffing currently expire in 2007, it is expected that they will be extended. The main concern is the possible incompatibility of the LCG software in the shared environment with the university cluster.

5.21. Poland, Polish Tier-2 Federation *R. Gokieli*

There are three centres in the Polish Federation. Posnan looks after the networking and serves ALICE. Warszawa serves CMS and Krakow serves ATLAS. A large fraction of the final cpu capacity has already been achieved and there are good hopes that the missing 30% can be funded (the capacity numbers are presently higher than was foreseen in September, due to favourable purchase conditions). Each centre has about 3.5 FTE's of effort, paid mainly by EGEE at the moment. For the future it is hoped that the experiments can help. The biggest present worry is mass storage but, since the foreseen work is mainly Monte Carlo production, it is hoped that this will not be too important.

5.22. USA, Midwest ATLAS T2 Federation *R. Gardner*
Presentation USA, Midwest ATLAS T2

The Midwest Federation has been active for about two years. The resource figures in the overheads represent an update to the numbers already given in the WLCG MoU.

5.23. Switzerland, CSCS *F. Orellana*
Presentation Switzerland, CSCS

The ramp-up in capacity is following the plan. 10% should be available in 2006, 30% in 2007 and the full amount in 2008.

5.24. Additional Overheads not presented during the meeting
UK, SouthGrid Italy, CNAF

5.25. Discussion

W. Von Rueden warns about the various potential future staffing problems related to the dependence on EGEE funding, which will surely come to an end. He therefore asks for strong support for the new EGO Research Infrastructure proposal.

M. Delfino enquires about the position of the CERN centre. W. Von Rueden confirms that the necessary funding is assured through 2006 and acquisitions are going according to plan. The challenge for 2007-8 will be to find the 13-14 MCHF that remain missing. He asks that there should be a site report from CERN at future meetings.

6. Summary and Future Activities *CERN CSO J. Engelen*

Noting the absence at the present meeting of a number of Tier-1's, J. Engelen feels that it will be essential that all are represented at future meetings.

T. Nakada observes that, in contrast to the Collaboration Boards of the experiments, this meeting had more the flavour of an RRB. The experiment CB's concentrate more on major policy issues or problems. He encourages the new Chairperson, N. Geddes, to think in this sense.

N. Geddes agrees that it will be important for the CB to work in the same way as those of the experiments. Nevertheless, he feels that the site reporting was appropriate for this first meeting. It is important that the Tier-2 centres get the necessary voice that they feel they should have.

P. Capiluppi considers that it will still be essential in the future that the agenda systematically includes a status report from the Project, perhaps not so long as that at the present meeting.

7. Date of Next Meeting

J. Engelen proposes that the date of the next meeting be settled by email. It is **so agreed**. The minimum frequency foreseen is annual but members are welcome to contact the Chairperson if they want to trigger a meeting earlier. N. Geddes proposes that it may be useful to have a next meeting in the autumn, perhaps in October. The CB **agrees** in principle to this.

***8.* Any Other Business**

There being no other business, the Chairman thanks participants once more and closes the meeting.