



Mike's Intro

Welcome to bunc edition 3. These last few months have been interesting times for us at BOINC UK. Let me share with you some of the exciting things we have been doing.

You may have seen the SETI Multi-Beam Receiver mp3 posts on the SETI forum. We were really pleased with that outcome (well over 5,000 downloads have taken place so far, and there is a link later if you would like to listen to it) and our thanks go to the Planetary Society for allowing its reproduction.

The Planetary Society have agreed that we can produce further articles, so you can look forward to yet more interesting material over the coming months and years.

We have also produced a unique hour long interview with Dr David Anderson and Eric Korpela from the BOINC and SETI projects respectively. Some fantastic information and facts emerged that were not generally known. If you have not heard it yet, you are missing something really special. The highlights are:

- The Geneva Conference
- Optimised Clients
- Southern Hemisphere Telescope
- The new Multi Beam Receiver Work Units
- SETI funding

These can be [obtained here](#) as mp3 recordings and are also available as podCasts. Download them if you have not already done so.

Finally, arrangements are well advanced for the

forthcoming live online conference with Dr Anderson and some of his team in late November. Check out forthcoming events later in this newsletter for details and how you might get involved. This is your chance to put your relevant questions to the people running BOINC and other projects.

Well time for me to give way to this edition's content. Enjoy!

Mike

www.boincuk.com

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Interview Special

Getting to know Matt Lebofsky

Matt is a long-term fixture at the Space Science Lab (SSL) University College Berkeley; he seems to be there almost every hour of the day and is always 'in the know' about what has gone right and what has gone wrong. Sometimes he is seen in the SETI forum, usually posting a great explanation or helpful comment to keep us all better informed.

Matt started at SSL in '94 working for a different research project that shared the same SETI staff. He got directly involved in SETI in '97 and with BOINC from the very beginning.

Matt's involvement with BOINC was mainly with the 'back-end' and web tools. His current role covers a variety of academic and technical tasks, such as contributing to academic papers, monitoring system performance, problem fixing, system administration and web support. It's a complex back-end system and requires a lot of attention; a large part of each day is trouble shooting, tweaking and fixing.

Talking about his average day Matt says "The phrase "whack-a-mole" comes up a lot. A new problem arises and everybody turns their immediate attention towards it until the next problem. I think we're all burning out on that - before SETI@home I'd just show up and write software and analyze data. Now I spend 90% of my time monitoring everything and doing damage control."

"I joked the other day that I spent half of the past 7 years entering the command 'tail -f ...'"

(For the non *nix fraternity this means he looks at the end of log files as they get written, to judge how the system is performing.)

Soft over Hard

Matt's aversion to hardware is striking; he's a software man for sure. He makes references to preferring an Apple II, being fed up with hand-me-down hardware on the project and how "Cell phones are evil". He likes his freedom and while he loves being at SSL Berkeley he would also love some more money! But there are upsides - the freedom; he went on tour with his band this summer for two months and his job back at UC Berkeley was 100% safe.

Matt is optimistic about SETI and BOINC. He feels they make a good contribution, especially BOINC with its ever widening list of science projects.

BOINC Links

1. Official BOINC
boinc.berkeley.edu/

2. Dr. David Anderson's Web Page
setiweb.ssl.berkeley.edu/

3. BOINC Rankings
Rankings of interest; see how you're doing against the rest of the world:
boinc.netsoft-online.com/rankings.php

4. BOINC Account Manager
From those clever people at BOINC Stats:
www.boincstats.com/bam/

5. DC Vault
See the rankings for all Distributed Computing teams etc.
www.dc-vault.com/

6. Team Lookers DC Vault Rank: www.dc-vault.com/showteam.php?team=370

"I hope this world-wide sharing of resources has positive political effects and furthers the open-source movement in general."

While funding is a concern, he is a little pessimistic about the hardware used for SETI as it is aged and lacks reliability on occasions. Overall though, Matt is pretty upbeat about the projects and is amazed at the number of volunteers that have joined over the years.

Asked to let on about his high point with SETI and BOINC he says "Going to the Bio-astronomy '99 conference in Hawaii, though I spent most of the time there snorkelling and hiking around the big island with my wife".

Thanks Matt for sharing a bit of your life with us and to Ian for his virtual globetrotting interview.

Next Guest ?

BOINCUK has lined up a series of players from the major projects.

We are certainly looking forward to hearing about them, their projects and their work.

Did you really think you would find out here? No chance! You have to wait for the next edition but we think you will find it interesting!

Profile: Matt Lebofsky

 **Age:** Mid 30's

 **Favourite BOINC Project:**

"I honestly don't have a strong opinion about this because (cough) I haven't tried out most of the projects myself. I'm too busy."

 **Favourite Band:**

"I'm a music junkie, so this list is always changing. Here are some current samples from my iPod: Motorpsycho, Magma, National Health, Gentle Giant, Gastr Del Sol, Cheer Accident, anything with Fred Frith or Robert Wyatt in it, Ivo Papasov, Mr. Bungle, Steely Dan, etc. I could go on and on forever about this."

 **Favourite tipple:**

"I don't drink very much. Occasional micro brew beer. I do enjoy jagermeister once in a while, if only because everybody else seems to hate it so much."

 **What did you plan to be when aged 10 :**

"Computer programmer by day, musician by night."

 **Matt's favourite mode of transport :**

"Currently my own two legs. My wife has a Toyota Camry. We never spend more than \$1000 on a car. New cars are a waste of money."

 **Matt's dream car:**

"Any car for \$500 that lasts 4 years without major repairs."

 **Hobbies:**

"Rock climbing, backpacking around the canyons of southern Utah (I'm there at least once a year) or around the California Sierras. Also filmmaking, writing, and following baseball scores. Basically, when I'm not at work, I try to avoid computers (though it's harder and harder in this modern age)."

 **Dislikes:** Don't get me started. You can read some of my rants at:
<http://www.whatthehellhappened.com>

 **Likes:** "Should be obvious by now."

 You are allowed three (real) things on a desert island - what are they?

"My wife, any one of my acoustic musical instruments (piano, guitar, bass, drums, saxophone.. well maybe not the saxophone), and a good knife for hunting, chopping, peeling, etc."

 **Website:** <http://www.lebofsky.com>

Project Mini-Feature & Update

Docking@Home: Andre Kerstens

Status: Alpha - With Effect From: September 11, 2006

Testers: Approx. 180 volunteers.

Web: <http://docking.utep.edu/>

Docking@home is a collaborative project that aims to accomplish both bioscience and computer science goals. From the bioscience point of view, the project aims to further knowledge of the atomic details of protein-ligand interactions and, by doing so, will search for insights into the discovery of novel pharmaceuticals. From the computer science point of view, this project aims to extend volunteer computing to enable adaptive multi-scale modelling of the docking applications: different models that represent the same phenomena in nature with different level of accuracy and resource requirements will be chosen at run-time based on results collected so far and characteristics of the protein-ligand complex. Docking@home involves collaboration among the University of Texas - El Paso, The Scripps Research Institute (TSRI), and the University of California - Berkeley and is powered by [BOINC](#). Docking@home is part of the [DAPLDS](#) project (or Dynamically Adaptive Protein-Ligand Docking System project) and is supported by the National Science Foundation (NSF).

So what exactly is GridRepublic?

Part I

We have been talking with Matthew Blumberg to find out exactly what GridRepublic is. This has certainly started to demystify it for us and we hope it will for you too. Matthew has been involved since day one and made the original approach to David Anderson with the idea nearly two years ago. He is as close to this as it gets so we make the most of this opportunity and grill him.

This is part I of a series on GridRepublic. The series explores what it is, why it exists, how it will help, who it will help, example usage, feedback so far and plans for the future. So let's get started and get to why it exists and what does it do.

Asking Matthew exactly what it is brought a comprehensive response.

"BOINC has a large and vibrant community, but the reality is that most people have never heard of the concept of volunteer distributed computing, nor of BOINC, nor any of the existing projects. Most of those who have heard of projects (most often SETI) have only a vague notion, and have no idea how they would participate. Indeed, most assume participation is beyond their technical competence, and so never investigate further. Taken together, these issues create a sort of "glass ceiling", limiting the growth of BOINC and volunteer distributed computing generally."

Asking how this was considered and talked through/explored further Matthew said:

"In November 2004, I approached David Anderson with the idea of what is now GridRepublic specifically and AMS generally, with an eye towards addressing these limitations. We sought to create a central point of access-- a tool to enable users to discover, select, install, and manage BOINC projects from a single interface. Ease of use was the guiding principle. The goal: BOINC on every desktop. (Why not?)"

So that helps us understand what it is and why it came about. I am pretty sure that many would agree getting started with BOINC can be a real challenge. Having people fall at the first fence denies the community a user but worse creates a credibility trap that deepens. So a means of avoiding that is of great appeal. Back to Matthew then with: So where did it go from there?

"We worked with David to set the feature list, and to figure out what changes were needed at the client and the project servers, and as he implemented those we started work on our end. For the first few

BOINC Links

This Article

GridRepublic
The home site of GridRepublic.
gridrepublic.org/

BOINC Links

Useful Statistics Sites

Links to Stats sites that may be useful to you.

Boincstats By Team, User, Nation and Project Stats.
www.boincstats.com/

Boinc Stats for the World from Boinc Synergy
www.boincsynergy.com

BOINCUK - Team and Project Stats and graphics
www.boincuk.com

DC Vault

See the rankings for all Distributed Computing teams etc.

www.dc-vault.com/

weeks, GridRepublic was to be a Control Panel application; then we decided for a variety of reasons that a web-based interface would be the better solution (ironically, one of the arguments was that we'd be able to develop it faster -- that was more than 18 months ago! Like most in the BOINC Community, this is a volunteer endeavour; things always take longer than you think they will.)".

So here we are, GridRepublic Beta is online, and now the proof will be in the pudding so to speak; we'll see if people find it easier to use an account manager, and if by improving ease of participation we do in fact draw in a wider pool of participants'

Matthew is clearly very enthusiastic for GridRepublic and with the potential to simplify BOINC and BOINC project access he is justified in feeling that way. As he says the level of usage by existing BOINC volunteers and the uptake by people new to BOINC will be an important indicator of both future acceptance and success. Please remember though that the development work on GridRepublic is ongoing so the project is Beta stage and in test right now. Part II *may* well have some test results feedback to share with us all. Right now Matthew is hoping we all give it a try and let our friends know about it. That will be the only way to prove that the important design criterion of ease of use and increased access to BOINC has been met.

Part II will follow in the next edition of bunc. We hope to see examples of use and have some feedback on how well things have gone. Also we may get an insight into plans for the proposed enhancements to: improve the registration process for current boinc users, expand the list of projects, add support for team management, improve stats to provide more detailed information and adding a community section with both forums and documentation. Will we see the "glass ceiling" is shattered? Matthew certainly hopes so!

Thanks Matthew and we look forward to more soon.

Boinc Rankings

Rankings of interest; see how you're doing against the rest of the world:
boinc.netsoft-online.com/

MundayWeb - Stats Counters

boinc.mundayweb.com

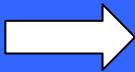
Boinc Stats Firefox Extensions

boincstats.mozdev.org/

Free-DC Stats for BOINC and Non BOINC projects.

stats.free-dc.org/

Get Involved



If you are already part of the team, then spread the word about bunc & www.boincuk.com

Get BOINC



<http://boinc.berkeley.edu/download.php>

Get a Project



<http://boinc.berkeley.edu>

Join Team 'Lookers'



Once attached to a Project, use the Project's own website and search for our team, 'Lookers' and then use the link to join.

Spread the word

Keeping Cool by Mike

Following the purchase of a new AMD64 4200+ dual core processor, I noted with just a little alarm how much hotter it ran than my previous single core AMD64 3500+ (Winchester) - even though it was fitted with the AMD CPU fan that came supplied - something in the order of 10C higher at about 60C. Considering it was a dual core and was running at 100% 24/7 crunching SETI I don't suppose I should have been too worried as the temperature was well within limitations.

The first option that crossed my mind was a better and more efficient fan. So I spent some little time looking round for a fan that would cool things a little better. Price-wise I was looking between £10 and £25 (\$18 - \$45) for a fan that produced a sufficient drop in temperature to make a difference.

However, during my meanderings around the net I came across an article on "undervolting" an AMD processor. Now I must admit that although I have owned and built computers for some years now, this is one subject I have not come across before. Overclocking and even underclocking yes, but undervolting no.

It would seem that AMD socket 939 and AM2 processors in particular (I have found nothing in relation to the earlier K6 and K7 processors) are quite happy with a lower core voltage than their default setting. Modern motherboards usually have an advanced facility in BIOS to alter voltages both up and down. I started slowly, reducing from the default of 1.35 volts and gradually making my way down to what is now a stable 1.150 volts. I did manage to get it down to 1.125volts and my system would run for about 24 hours before the mouse would freeze and a reboot became necessary for some reason.

Even a modest reduction in volting down to 1.3 started to show immediate temperature drops.

The result of this undervolting? Certainly no loss of system speed - it still runs at its default bus of 200Mhz and core speed of 2200Mhz. Temperature is something else. Idle temperature is now 30C, and under full load crunching on BOINC and running other applications is now between 38C and 40C depending on local ambient temperature - a 33% reduction in core operating temperature for precisely nothing other than the 2 minutes it took to reboot and go into BIOS each time to gradually reduce the voltage.

The benefit to a processor? Simple, the cooler it runs the longer it will live. Undervolting will not damage a CPU in any way - so what have you to lose? - Nothing. What have you to gain? Simple again - a longer life for your processor, and don't forget, a smaller electricity bill because a lower voltage will mean your processor will use less power.

Related Links

CPU Cooling
Benchtest.com

The Heatsink Guide
Wealth.of.information.to.help.cool.the.kit

The Basics - Why do CPUs get Hot?
Information.for.the.beginner.and.forums.to.ask.questions.

The Good Ole Wiki - Ever helpful
Tells.us.all

Ever Reliable Tom's Hardware.
A.review.of.coolers.not.to.be.missed.

There is no intention here to endorse any product or service.

By The Way.....

Forthcoming Events - Don't miss Out!

Conference - BOINC UK have organised an online conference with the team from Berkeley. David Anderson, Eric Korpela, Rom Walton and Matt Lebofsky have all agreed to talk live with BOINC users and volunteers.

If you are interested in entering the draw to win a place at this **unique and prestigious event** then [register here](#). The event is scheduled for late November 2006 and places are limited to about 20. You will get a chance to ask a question of the panel if you wish. Alternatively you can just to listen in to what will, we are sure, be a fascinating event.

Christmas bunc Edition - Register to make sure you get yours by e-mail. [You can do this here](#).

Project News

Docking@home went Alpha. See mini feature in this newsletter

Seti@home - Eric Korpela tells us there will be new longer work units as of October 06.

Did you.....?

..... get your podCast/MP3 recording of the Lookers interview with David Anderson and Eric Korpela? Not one to be missed that so get yourself a copy at our web site www.boincuk.com. Also there is the SETI Multi Beam Receiver recording based on a great article from The Planetary Society and reproduced with their permission.

..... see the Geneva BOINC Conference outputs. Held in September 2006 [you can see the proceedings here](#). Quite an agenda and many important outcomes that will be of interest.

Gossip.....Psssst.....

Are the rumours true that Boincstats is to be supported and provided by Berkeley in the future? Hmmmm...interesting!

Did you hear Rytis has taken over the forum code for the BOINC project? Janus was too busy to continue so a big thanks to him for his great work and good luck for the future. Welcome Rytis!

To enter the BOINUK draw for the forthcoming conference there will be three questions to answer. Did you hear a certain team thinks they know what they are before we even created them? Wow! Now that's good! Let's hope they let us know what they are and if they are that good well who knows they might just get used.

boincuk.com

Features of our website

1. Stats Sigs

Create your own Stats Signature for your website, or for within Forums.
www.boincuk.com/show3.php
Keeps you up to date with your current credits

2. BOINC FAQ

Frequently Asked Questions and useful answers you can understand!

www.boincuk.com/faq.php

If you have a Question, there is an online form for you to submit your query.

3. Mobile Phone Stats

Team members can get their statistics by surfing on their WAP or web enabled mobile phone.

www.boincuk.com

4. RSS News Feeds

Get our News on your website:
www.boincuk.com/wantrss.php

5. podCast Feed

Stay up to date with our podCast feed.
[podCasts](http://www.boincuk.com/podcasts)

6. Message Board / Forum

<http://forum.boincuk.com>

BOINC UK And Our Projects

We may have come from SETI, and we may love SETI, but there are more Projects than you may know out there, and so perhaps you'd like to devote a proportion of your crunching time to a new project or two?

BOINC UK run several teams, all called 'Lookers' and all of them add to our overall BOINC Team Stats.

Looking at the table of Team Lookers Projects, you might find there's room for you to join more than just our SETI Team.

[A full list of all projects can be seen here](#)

Main Team Projects

[SETI@Home](#)

Members

334

[Einstein@Home](#)

37

[CPDN](#)

30

[LHC@Home](#)

13

[Predictor@Home](#)

9

[SETI@Home Beta](#)

2

[Rosetta@Home](#)

27

[QMC@Home](#)

7

[PrimeGRID](#)

3

[BBC Climate](#)

3

[Project Neuron](#)

3

Project Run Down

SETI@Home - many of us were introduced to the concept of Distributed Computing by the Classic SETI Screensaver back in 1999, and we're still proud of our Classic Totals. Searching for patterns in radio signals from space - evidence of Extra Terrestrial Intelligence.

Einstein@Home - is he? Enquiring Minds want to know. Analysing gravitational wave data in the search for spinning neutron stars out in space.

CPDN - ClimatePrediction Dot Net (get it?) - forecasting needs lot of processing power, join the largest forecasting experiment.

Predictor@Home - virtual prediction of protein molecule shapes based on their protein sequence. Understanding the shape of proteins helps all sorts of biological endeavours.

QMC@Home - Quantum Monte Carlo; hmm, maybe it should be 'Quantum Mechanics...' - nope,

apparently 'the Monte Carlo Method' is a mathematical method of analysing data using random numbers and ...stuff. QMC is a Quantum Chemistry project that approximates and infers the state of molecules, rather than measuring them. Understanding the shape of molecules helps all sorts of chemical and biological endeavours.

Rosetta@Home - Virtually folds protein molecules to analyse protein interactions. Understanding protein shapes in this way has enormous implications for biology and disease.

LHC@Home - simulates particles traveling around the LHC particle accelerator to study the stability of their orbits, allowing the Large Hadron Collider to be built and giving further insights into physics. Very cool screen saver apparently, for those of you who like that sort of thing.

SETI@Home Beta - Live testing of the next version of SETI@Home.

Orbit@Home - cool Linux based project, monitoring the orbit of all the asteroids passing near the Earth.

SIMAP - database of calculated protein similarities that requires a lot of computational power to keep upto-date.

Project Neuron - Work to establish BOINC project quality credentials for users to contrast and compare when choosing a new BOINC project.

Each of us should consider what we feel great about getting involved with - there are debates about the worthiness of BOINC projects; what we do know is that discoveries occur in two ways; by happenstance, and with hard work. Get involved, support another project this month.

Join Team 'Lookers'

Spread the word about BOINC UK



About BOINC UK - www.boincuk.com

BOINC UK, the website of Team 'Lookers' provides statistics, news, articles and this Newsletter for everyone and anyone; we also offer great 'Stat Signatures'. We have a developing Message Board for members to get to know each other and exchange hints and tips.

We do a lot more than crunch numbers. BOINC UK aims to:

- be a definitive source of quality BOINC information presented in novel but usable ways.
- bring both the behind the scenes project people and the heroes to the front so we can meet them and understand what they do.
- bring more people to the BOINC community and to help retain those already members of our community for the benefit of science.

We add more than CPU seconds - we add value!

About bunc

bunc is an electronic newsletter provided for free from BOINC UK Team Lookers, and covers anything of interest regarding BOINC and BOINC Projects. People are free to send us contributions and we welcome the input of non team members as well as team members.

Jobs and Vacancies

BOINC UK and Team Lookers are always looking for new people to bring new ideas. Just join us and see how your talents can be translated into great products and events. Help shape, inform and add value for, and on behalf of, the BOINC community!

Right now we have a particular need for - a new team member that will act as **Editor and Producer** of the expanding BOINCUK mp3 and podCast library. Applicants must

- Have the tools to collect, convert formats, edit, produce outputs and add additional material e.g. sound tracks
- Be ftp and web savvy.
- Have past experience of production in this or a related area
- Be able to work to tight and demanding deadlines
- Must join the Lookers team

BOINC UK has undertaken a programme of interviews and conferences with the major players and the major projects over the next 2 years. The team intends to build a definitive set of quality recordings now and video in the not too distant future.



Jobs and Vacancies Continued

Be part of the most progressive team in the BOINC world. Title in all work produced will belong to BOINC UK. Individuals will be credited. There is NO funding associated with this position so applicants must be prepared to supply all that is needed for success.

Salary - £0.00 p.a.

Notice period - 1 month.

Benefits - Being part of a great and highly capable team.

Email Mike@boincuk.com if you are interested.

BOINC UK - Adding value to scientific research.

Why bunc?

bunc might be an acronym for BOINC UK Newsletter Circular, but mostly, it's a play on the 'BOINC' acronym, and a reference to 'bunk' or 'bunkum' which means "nonsense and empty chatter". You can submit news, views and articles for the bunc newsletter to mike@boincuk.com

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