

# 20130327 SLAC SEECS and UNIMAS Meeting

## Time & date

Wednesday 27 March 2013 9:00pm Pacific Standard Time, Thursday March 28 2013 9:00am Pakistan time, Thursday March 28 2013 12:00 noon Malaysian time.

## Attendees

Invitees: Anjum\*, Kashif\*, Johari\*, Nara, Abdullah, Badrul, Hanan-, Fidah, Saqib\*, Les\*, Raja-, Umar- and Bebo\*

\* Confirmed attendance

- Unable to attend

Actual attendees: Anjum, Kashif, Johari, Saqib, Bebo, Les

There was a cut in the South East Asia-Middle East-West Europe 4 (SEA-ME-WE 4) cable that runs 12,500 miles from France to Singapore, with branches connecting telecommunication companies in Malaysia, Thailand, Bangladesh, India, Sri Lanka, Pakistan, United Arab Emirates, Saudi Arabia, Egypt, Italy, Tunisia and Algeria. Of the ~ 3300 networks in Pakistan hundreds of the smaller networks were affected. However the quality of the Skype connection was good.

## Workshops

Johari recommended a future PingER workshop later this year. Hanan at UTM has agreed to take the lead. **It will be 25-26 June at the University of Malaya. There is a document.** I have amended the schedule to replace Les by a NUST person (Kahsif/Anjum?) for the second day technical sessions from NUST.

**It does not appear possible to fund someone from NUST or Bebo. If this is the case, then Saqib and Johari will give the second day technical session using Kashif's presentation at UNIMAS last year. Kashif will connect remotely to provide assistance. For the NUST session on experiences on the first day, Anjum will pre-record the talk. In the case of Bebo he would only come if he could contribute, also June is a problem for him. He would be able to participate remotely for the session on futures. Also Bebo is interested in working with students at SLAC on new visualization tools.**

**Les will send an email to Abdullah Bin Gani strongly advocating the funding of a person from NUST.**

**For attendees Anjum pointed out it would be good to get 2 representatives from each of the 20 public Malaysian universities. One participant would be from the computer division (more to do with installing and maintaining), the other from Faculty (more for the research side). It would also be good to get a non MYREN University and someone from Malaysia Telecom. Bebo will provide contacts at MIMOS and Manipal.**

## Funding/Proposals

**Johari reported that the FRGS proposal had been accepted. It is for 75K MRs (~\$35K). It is for 5 people.**

The Next step in funding is to go for bigger research funding, such as LRGS or eScience. We can use the upcoming workshop (1 specific session) to brainstorm and come up with such proposal. We need to do some groundwork before that as well. **Johari will take the lead in putting together 1/2 page descriptions of the potential research projects.**

1. Need to identify a few key areas of research related to PingER Malaysia Initiative and this can be shared/publicized through the website. These might include using the infrastructure and data for: anomaly detection; correlation of performance across multiple routes; and for GeoLocation. Future projects as Les listed in Confluence here <https://confluence.slac.stanford.edu/display/IEPM/Future+Projects> can also be a good start and also Bebo's suggestion.
2. Need to synchronize and share research proposals so as not to duplicate research works. how to share? Maybe not through the website, or maybe can create a member only section of the website to share sensitive data such as research proposal?

Anjum mentioned a paper on [Evaluation of IP Geolocation Algorithms on PingER and PlanetLab Infrastructures](#), by Fida Gilani et. al. submitted to IEEE INFOCOM 2011UNIMAS. This could be updated with new data and maybe submitted to a different venue. Anjum forwarded a copy of the paper to Johari, Abdullah and Hanan with copies to the team. The idea is to see whether there is interest at UTM, UM or UNIMAS.

**We also agreed that the projects we have been gathering should be divided into Development and Research. Since the meeting Les did this, see [Potential PingER Projects](#) .**

## UNIMAS

There is a problem with the UNIMAS traceroute. It appears both in pinger.unimas.my and in the Raspberry. It appears pinger.unimas.my is behind a NAT that is not passing the traceroute UDP probes. Other hosts at UNIMAS are not seeing the problem, so Johari believes it may have to do with the IPTABLES in pinger.unimas.my. Traceroute using the -I option (send the probes using ICMP rather than UDP) seems to work (but needs root access). Thus it would appear not to be in the return (ICMP "time exceeded") response. The probes (when not using the -I option are UDP packets using sequentially ports 33434 - 33465 for up to 30 hops). It is possible that ports > some number may be blocked. **Update Johari, Anjum.**

Johari has set up a guest account for Anjum. Anjum logged on and reported some concerns about addresses and interfaces not matching. He does not believe it is due to the Load Balancer. The traceroute/ping server is important for the TULIP trilateration project and also understanding routing within and from Malaysia.

Johari has set up a web landing site for the Malaysian collaboration. It is at <http://pinger.unimas.my/pinger>. It contains:

- brief history, description of the project and the objectives
- link to main SLAC page
- Link to NUST site
- list of names, contact details (email, etc), their affiliation, and the scope of job in the project
- a link to the data collected from UNIMAS and also other hosts in UM, USM, and UTM when they have their monitoring host running
- link to meeting minutes for 2013 in Confluence to do: links to minutes from 2012, 2011, and 2010
- Bebo added as an advisor
- details of the workshop in UNIMAS and also slides from the talks and hands on sessions

To do for the website:

- add some images from the workshop conducted in UNIMAS
- add a list of monitored sites (currently the list is linked directly to the SLAC site)
- add info on research (what to add here? eventually list of research grants, publication, etc)

**Please visit the website, any feedback, corrections, suggestions are much appreciated.**

**It would help to have an MoU between SLAC and UTM. Based on DOE current MOU policy, using the UNIMAS MOU format will not work.** SLAC's legal folks also do not think that merely adding additional parties to the current MOU will work either. The new DOE policy will require a new approval. **We may be able to get DOE approval of a Work for Others agreement. To do a WFO agreement we would need, at a minimum:**

1. A detailed project description describing the activities each party will perform
2. A description of the deliverables SLAC will provide
3. A schedule with completion dates for the activities
4. The key personnel and contact information for both parties
5. The term for performance of the project activities
6. An explanation of the unique capabilities SLAC will provide to the project not available elsewhere
7. An explanation how the project is compatible with existing SLAC program(s)
8. An explanation how the project enhances the mission of SLAC

Assuming we can get these issues addressed, our legal folks think we could seek DOE approval and enter into an agreement with these other universities. We need to hear back from UTM and UM whether we need/want to pursue this further. It will probably be a considerable effort. UTM & UM will need to address 1. We all need to think about 3. 4 is easy, 2 is doable, 7 and 8 are tricky.

## UTM

The UTM Pinger site is [http://pinger.fsksm.utm.my/cgi-bin/ping\\_data.pl](http://pinger.fsksm.utm.my/cgi-bin/ping_data.pl) to get the data. .

The traceroute server is also running. It is at: <http://pinger.fsksm.utm.my/cgi-bin/traceroute.pl>. Saqib discovered the problem was a timeout in traceroute.pl. Saqib has extended the timeout and it works better. **There may still be timeout problems and Saqib will experiment with longer timeouts of up to 280ms.**

**Saqib is starting to look at Pingtable.pl anomalies as a start in a case study for Malaysia and S.E Asia.**

**We should discuss:**

**It is not easy to find such sites in those states. Obvious targets are universities, for example UUM in Kedah and UNIMAP in Perlis, but those sites are not ping-able. One way is to approach these universities and explain to them about Pinger project and request for the ping packet to be enable. Les has sent HostFinder.pl to Johari to possibly assist in finding hosts.**

## UM

Since the traceroute is working, "we" can start to make a routing study similar to <https://confluence.slac.stanford.edu/display/IEPM/Routing+from+UNIMAS>. Badrul has a student who will be working on the case study and will coordinate with Saqib at UTM and Johari at UNIMAS to combine results and to put together a paper for the Malaysian ISI Journal probably around the end of June

## NUST

Raja is waiting for the Letter of Support from NUST after which he will mail the documents for SEVIS ID process. (3/20/2013). Anjum believes he will get the letter signed by 3/21/2013). Anjum mentioned there were discussions between Raja and NUST that need to be resolved. **Next day after the meeting things seemed to be cleared up, since Raja forwarded to SLAC the letter of support from NUST.**

**The visit of Arshad and the NUST Rector to UM and UTM fell through due the Rector being sick.**

## Potential projects

[See list of Projects](#)

[Managing <HostList> for Malaysia from Johari](#)

Since the number of monitoring nodes in Malaysia is likely to grow, it is a good idea to start thinking of automated ways of synchronizing the <HostList> section. A few thoughts on this matter:

- we can use the same approach as the automatic updating/sync of the Beacon List. This would require modifications to pinger2.pl
- which node will be the trusted/root node in Malaysia for updating? since any single monitoring host can add any number of new hosts, might a mechanism to cross check between monitoring hosts.

### Bebo's suggestions

(1) Creative visualization of PingER data including rich interaction;

(2) Publication of PINGer data in Linked Open Data formats thereby increasing its usefulness to other researchers. An example is RDF/XML. This could be a development project (as opposed to research) for a final year student. Anjum pointed out that converting the PingER storage mechanism is a major task based on the experience at NUST when they converted te SLAC PingER flat files to a database. On the other hand maybe one could do the conversion on the fly in response to a request. Johari might be able to use some of the funding he received for such a development project (e.g. to enhance pingtable.pl to add this format to its download capabilities).

If these are of interest, Bebo is willing to work with students who come to SLAC and remotely with students at UNIMAS and NUST. Bebo believes that both of these areas have great potential for papers within the conference communities with which he is directly involved.

With PingER going back over a decade, its presentation tools tend to be a bit jaded having in some cases been developed in the 90's. New, modern ways to access display and navigate the data would be a big plus.

### Coordinate and lead the installation of PingER monitoring at multiple Malaysian sites

Build and install a new <http://www-iepm.slac.stanford.edu/pinger/tools/pinger-2.0.2.tar.gz> file with the improved version of pinger2.pl

Make PingER support IPv6.

### PingER at SLAC

The [annual report](#) to the International Committee for Future Accelerators (ICFA) Standing Committee on Inter-regional Connectivity (SCIC) has also been completed. Les has been invited to give a general colloquium at SLAC on the Internet where it came from, challenges and how it is performing. the latter section will report some PingER case studies and measurements.

### TULIP

Raja is experimenting with using different alpha values as well as different target landmarks in Europe, America and Pakistan. So far the results of using a constant alpha value and variable alpha values based on RTT are quite similar. I am trying to find the conditions and situations under which using variable alpha values is better. (3/20/2013).

Raja has completed the MATLAB script and used it to generate some input files for Pakistan and Europe. However using the alpha values (function of both region and RTT value) found through the alpha analysis the distances were underestimates in some cases. He is working on finding the cause and possible solution. Did you get an answer?

### Future meeting - Les

Next meeting Wednesday 10 April 2013 8:00pm Pacific Daylight Time, Thursday 11 April 2013 8:00am Pakistan time, Thursday 11 April 2013 11:00 am Malaysian time.

There is a doodle poll at <http://doodle.com/fnwzs5yu7fmux86>. Note that the Doodle poll times are GMT (e.g. 3am 11 April GMT = 8pm 10 April PDT, = 11am 11 April Malaysia time, = 8am 11 April Pakistan time)

### Coordinates:

Institute	name and Email	Skype ID
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