**NIST Big Data Public Working Group (NBD-PWG)**

**NBD-PWD-2015/M0429**

**Source: NBD-PWG**

**Status: Draft**

**Title: Web chat from Meeting of Aug. 11, 2015**

**Chat Log D:\\_wo\1DMG\2015\\_BigDataWG\Docs\ChatLog 2015\_08\_11 16\_06.rtf**

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:00 PM: We'll put ourselves on mutae.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:01 PM: IETF Internet Security Glossary, Version 2.0, 2007......a free gift...https://tools.ietf.org/pdf/rfc4949.pdf from Pw

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:02 PM: Tim why don't you buy me lunch and use my set up for the next meeting.....we won't mind.....?

**Tim Zimmerlin (to Everyone)**: 1:10 PM: How about "service" instead of "provider"?

**Tim Zimmerlin (to Everyone)**: 1:11 PM: …for version 2!

**Ian Gorton (to Everyone)**: 1:11 PM: i much prefer service. there may be better options. I really don't liek provider

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:11 PM: Yes....Service Provider or Contract Service Provider or Contractual Provider.....or Big Al....

**David W. Boyd (to Everyone)**: 1:12 PM: We need to remember this is a Role so provider can be any type of actor - person, organization, or software component.

**Tim Zimmerlin (to Everyone)**: 1:13 PM: Dave, agreed. How could the NBD-PWG align role/actor with service(s)?

**David W. Boyd (to Everyone)**: 1:13 PM: However, given the nature of the comments I agree that the name should change. There have been several good discussion. Right now I am leaning to Big Data Application Instance

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:14 PM: Service Provider is in-line with the Cloud WG....last time we checked.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:16 PM: We agree....as data is now and will always be a non-term....term.....data is almost a meaningless term.....sorta like....you understood....of course we're dealing with data.....it's all data to me....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:18 PM: It's the Service Provider and the commodity they're providing is moving the data packets...from here to there....or their destination...if you wish......

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:19 PM: For a price....of course...

**Ian Gorton (to Everyone)**: 1:19 PM: Instance is a big improvement too

**Tim Zimmerlin (to Everyone)**: 1:20 PM: Is there a one-to-one relationship between a provider and a service? Probably not. Are there many providers of the same service? Probably for some services. Do providers change for any one service? Maybe.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:21 PM: But it's not a Data Provider rather it's a Data Service Provider....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:22 PM: Data Creator....Data User/End User....and Data Service Provider......in multiple flavors.....

**Tim Zimmerlin (to Everyone)**: 1:22 PM: Pw, ok, how about Big Data Service Providers as the title in the RefArch?

**Ian Gorton (to Everyone)**: 1:22 PM: Data source is a massive improvement on data provider

**Frank Farance (to Everyone)**: 1:22 PM: Here are pairings: data source, data sink

**Frank Farance (to Everyone)**: 1:23 PM: data producer, data consumer

**Frank Farance (to Everyone)**: 1:23 PM: data publisher, data subscriber

**Frank Farance (to Everyone)**: 1:23 PM: soure/sink are simply about data inputs and outputs

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:23 PM: Dear Tim: Big Data Service Providers.....just rolls off the tongue, doesn't it....Thanks, Tiim

**Tim Zimmerlin (to Everyone)**: 1:24 PM: Pw, U thunk it so U own it!

**Wo Chang (to Everyone)**: 1:24 PM: We did try Data Producer and Data Source but after much discussion, we decided to have consistency of using Provider across most some RA compoments.

**Frank Farance (to Everyone)**: 1:24 PM: producer/consumer are service oriented, can provide strreamed data, but also can provide searchable/random-access data

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:24 PM: Finally...we're published....Thanks Tim

**Frank Farance (to Everyone)**: 1:25 PM: publish/subscribe are topic-based with a "conceptual" buss of entities, definitely stream-based, possibly no random access

**Mark Underwood (to Everyone)**: 1:30 PM: If this was such a problem, it would have surfaced in the public comment. It did not.

**Tim Zimmerlin (to Everyone)**: 1:31 PM: Mark, good comment.

**Tim Zimmerlin (to Everyone)**: 1:32 PM: I perceive the tension is between those folks focused on roles versus those focused on services. Where is the common ground?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:32 PM: Mark: Are we discussing a 'non-issue'....?

**Tim Zimmerlin (to Everyone)**: 1:34 PM: Let's keep all the good stuff, moving forward.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:34 PM: Tim: Ok....

**Ian Gorton (to Everyone)**: 1:35 PM: i think i'm still muted

**Frank Farance (to Everyone)**: 1:35 PM: Wo, I think we're all muted

**Frank Farance (to Everyone)**: 1:35 PM: WO I THINK WE'RE ALL MUTED

**Ian Gorton (to Everyone)**: 1:35 PM: nothing worthy to say anyway ;)

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:36 PM: Also....can we flip/flop 'Security & Privacy' to 'Privacy & Security'.....placing the emphasis on privacy.....which is becoming more center stage as we roll along....

**Mark Underwood (to Everyone)**: 1:37 PM: PW \_ We have lots of issues. The objections have merit, but changing the RA so fundamentally is a big editorial impact that cascades across all the docs. And it iwll be a tall order to get consensus on whatever is proposed as a replacement

**Mark Underwood (to Everyone)**: 1:37 PM: And the few less technical communities who have seen this RA as is already think it's \*too\* technical to be helpful

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:37 PM: Ok....nice idea...but not now....ok, got it....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:38 PM: Is Amazon a Service Provider.....or an Instance....?

**David W. Boyd (to Everyone)**: 1:39 PM: As I commented on the reflector - under WG9 we are looking at multiple views of the architecture and that is a valid approach we should look at for the NIST diagram.

**David W. Boyd (to Everyone)**: 1:39 PM: Currently WG9 they are looking at User/Activity and Functional Component Views.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:40 PM: David: Does this translate into Service Provider...?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:43 PM: The world of Big Data is organically evolving....even as we speak....

**David W. Boyd (to Everyone)**: 1:43 PM: No

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:43 PM: David: So AWS is not a Service Provider, correct...?

**Tim Zimmerlin (to Everyone)**: 1:44 PM: There are many relevant architectures from HPC and HTC communities supported by NSF and DOE. There are research architectures categorized as GIANTS, DWARFS, and Ogres. There are cloud architectures like the NIST Cloud architecture.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:44 PM: Within the world of Big Data...

**Tim Zimmerlin (to Everyone)**: 1:44 PM: Pw, yes, for big data.

**Ian Gorton (to Everyone)**: 1:45 PM: AWS is a deployment platform. Mostly physical resources in the diagram

**Ian Gorton (to Everyone)**: 1:46 PM: there are many possible deployment platforms. teh diagram has to abstract this

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:46 PM: Ian & Tim.....utilizing a Big Data eco-system to accomplish it's job....no?

**David W. Boyd (to Everyone)**: 1:46 PM: Yes AWS is a service provider. It would fall within the BDRA as an infrastructure provider.

**Ian Gorton (to Everyone)**: 1:46 PM: i have no idea what a big data ecosystem is - sorry

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:48 PM: Ian....an umbrella term for the end-to-end Big Data architecture.....leaving nothing on the floor for the janitors to sweep up....

**Tim Zimmerlin (to Everyone)**: 1:48 PM: IIRC, Orit concluded that application SW providers are grouped together and system SW and HW providers are grouped as a separate rectangle. I.e., SW apps vs system SW + HW.

**Ian Gorton (to Everyone)**: 1:48 PM: i just call that a big data sysetm - eco-less ;)

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:49 PM: Eco-less sounds pretty darn cool.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:49 PM: aka: no verbrato.....eh.../

**Mark Underwood (to Everyone)**: 1:49 PM: Ian - you could make the same complaint about IEEE's IoT ecosystem document - but it's part of pushing the standard fwd http://standards.ieee.org/innovate/iot/study.html

**David W. Boyd (to Everyone)**: 1:49 PM: Part of the reason for the inclusion of the term ecosystem was that so many Big Data functional components are interdependent. Like an eco system.

**David W. Boyd (to Everyone)**: 1:50 PM: Lets look to do a 1.01 and fast track it with some of these changes over 4 months.

**Tim Zimmerlin (to Everyone)**: 1:50 PM: Dave, why not wait for version 2 in a year?

**Tim Zimmerlin (to Everyone)**: 1:51 PM: This effort is akin to pulling a thread on your sweater.

**Ian Gorton (to Everyone)**: 1:51 PM: I understand ecosystem in the context of IoT, where things are inherently less coupled and massively physically distributed

**David W. Boyd (to Everyone)**: 1:51 PM: Thats was what I originally thought we should do Tim. But everyone is intent on getting things changed now.

**Geoffrey Fox (to Everyone)**: 1:52 PM: I agree with Ashok. We had an editing process; we can't change V1

**Tim Zimmerlin (to Everyone)**: 1:52 PM: Dave, not really. Some folks want reassurance. Some folks are distancing themselves.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:54 PM: Ian....our view of the IoT is really just the opposite.....based upon recent hacking events in the news.....taking over the controls of a Tesla.....taking over the controls of an airliner....et cetera.....

**Tim Zimmerlin (to Everyone)**: 1:55 PM: I vote with Ashok.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:55 PM: My entire R&D Team agree....with getting Version One...out the door....here...here....

**David W. Boyd (to Everyone)**: 1:56 PM: There were months of editing that went into this. Did Orit and I miss comments - likely. But there was a comment period that is now past for several months. Those comments should have been provided then.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:56 PM: Such as...."everything you just read is subject to change...." that should do it....

**David W. Boyd (to Everyone)**: 1:59 PM: oh and this disclaimer would need to go into EVERY one of the documents that uses the term APplication provider. So all 7 documents need to change.

**Tim Zimmerlin (to Everyone)**: 1:59 PM: Mission Creep: better is the enemy of good enough. Everything looks easiest before the real work begins.

**David W. Boyd (to Everyone)**: 2:00 PM: It is a concern, but as someone who writes proposal for a living, I can address those concerns in any proposal I wrote to this reference architecture.

**Tim Zimmerlin (to Everyone)**: 2:01 PM: The NIST boilerplate always state unequivocally that NIST does NOT promote specific vendor products.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:01 PM: Dear Dave: Guess we just don't like the term 'Application Provider'......as we view it as a collision of terms.....just our personal/professional feeling deep in our guts....

**Ian Gorton (to Everyone)**: 2:03 PM: PW - IoT is inherently distributed, multiple devices, components intermittently connected, etc. Security flaws don't change those inherent characteristcs

**Tim Zimmerlin (to Everyone)**: 2:03 PM: Orit's intent should be considered. Her dichotomy was between "application SW" provider versus "system SW and HW" provider. This is a common distinction in RFPs.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:03 PM: Just strip out " INFORMATION VALUE CHAIN".... heading at the top of the diagram.....

**David W. Boyd (to Everyone)**: 2:04 PM: I don;t like the term either after the discussions.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:05 PM: Ian....losing control of your car thanks to some remote outside hackers is quite a 'security flaw'.....no?

**Russell Reinsch (to Everyone)**: 2:07 PM: I think my audio just went into laloopa palooza

**Ian Gorton (to Everyone)**: 2:07 PM: Pw - it is, but that is what it is. If your car is connected to teh world, its open for attack. Liek everything in IoT.

**Ian Gorton (to Everyone)**: 2:08 PM: Tim - you sound liek a badley programmed robot ;)

**Ian Gorton (to Everyone)**: 2:08 PM: as comprehensible as my typing ;(

**Tim Zimmerlin (to Everyone)**: 2:08 PM: Orit, placed big data SW vendors in the middle rectangle.

**Tim Zimmerlin (to Everyone)**: 2:09 PM: Orit, placed the big iron vendors in the bottom rectangle. This is how Microsoft views it.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:09 PM: Ian: Nothing wrong with fat fingers.....and the internet of things gives me the creeps.....due to our cruel and twisted imagination.....of the worst possible consequences....

**Tim Zimmerlin (to Everyone)**: 2:10 PM: The version 1 RefArch is good enough for version 1. Ok?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:11 PM: Yeah, but what else did we have at that point in time......?

**Ian Gorton (to Everyone)**: 2:11 PM: i echo Gary/Frank too. I raised these terminology issues with Orit many times, and they were ignored. Sorry ...

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:12 PM: Well....since Orit is better looking than the rest of us.....we'll side with Orit's efforts to get something to replace nothing.....at that point in time....

**Tim Zimmerlin (to Everyone)**: 2:14 PM: Publish version 1 ASAP, please.

**Russell Reinsch (to Everyone)**: 2:14 PM: Tim - I wasnt making fun of your mic issue; I actually lost audio for a minute

**Tim Zimmerlin (to Everyone)**: 2:14 PM: Strategic changes will take more effort than we might predict.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:15 PM: How hard is it to wipe out the subjective phrase: "INFORMATION VALUE CHAIN" ......?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:15 PM: and while we're at it.....wipe out "IT VALUE CHAIN".....too

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:16 PM: Your 'value' is our Net Loss.....

**Keith Hare (to Everyone)**: 2:20 PM: This diagram is sufficiently general that any vendor should be able to write a reponse that fits the diagram.

**Ian Gorton (to Everyone)**: 2:20 PM: I dunno enough about the NIST standards process to have any insights on this. I really don't liek teh diagram but it is so general as to be almost meaningless and, using Douglas Adams terms, 'mostly harmless'

**Mark Underwood (to Everyone)**: 2:20 PM: +1 Keith

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:21 PM: We view this document as an introductory guide / road map for those coming to the table with a blank sheet of background and knowledge......(aka: a handy/dandy....reference guide.....to provide background information....and points of reference....) correct...?

**Tim Zimmerlin (to Everyone)**: 2:21 PM: Amazon AWS, Microsoft Azure, and Google Compute Engine all have standard "boilerplate" for enterprise contracts, written by lawyers and used in courts.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:22 PM: We agree with Tim and that's why they have attractive Sales Men......ere Women....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:24 PM: Dear Sir: We agree with you, too.....

**David W. Boyd (to Everyone)**: 2:24 PM: OK - we have spent 1.5 hours now on this topic. Time to move on.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:25 PM: First you write the Requirements....then you fit the RFP to meeting these Requirements......not based upon a NIST Diagram.....that's dare we say 'silly'......

**Tim Zimmerlin (to Everyone)**: 2:26 PM: The RefArch distinguishes "application SW" providers from "system SW and HW" vendors. This is a natural distinction and works well in contracts.

**David W. Boyd (to Everyone)**: 2:26 PM: FYI - THIS IS NOT a NIST standard. It is a special report.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:26 PM: Thank you for that clarification......

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:27 PM: This document is raising the knowledge level for all boats surrounding Big Data.....

**Tim Zimmerlin (to Everyone)**: 2:27 PM: One often choses a different system vendor like IBM, HP, Dell from the chosen big data application vendor like Apache Hadoop, Spark, noSQL.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:29 PM: In a hybrid environment you collect multiple specialities......vendors....with various skill sets to meeting the Contractual obligations....no?

**Tim Zimmerlin (to Everyone)**: 2:29 PM: Conformity: who is/are your system vendor(s)? Who is/are your application SW vendor(s)?

**Tim Zimmerlin (to Everyone)**: 2:30 PM: I sometimes point people to the NIST cloud architecture. i tell them to start with big data in a cloud.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:30 PM: Who ever is available....this includes price points, too.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:31 PM: & technically competent.....but within budget....

**Tim Zimmerlin (to Everyone)**: 2:32 PM: Pw, the situation is that system vendors charge and application vendors usually use open source SW. Profits accrue from "services" and longterm O&M.

**David W. Boyd (to Everyone)**: 2:33 PM: I do not think this is the right thing to do. The term is not that misleading or there would have been more comments during the comment period.

**Mark Underwood (to Everyone)**: 2:33 PM: +1 Dave

**Tim Zimmerlin (to Everyone)**: 2:34 PM: Wo, please talk to NIST lawyers about caveats. I suggest it be at the front boilerplate disclaimers.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:34 PM: Dear Dave: Please stress that this question did not come up.......regarding confusion over the term 'Provider'......is that correct.....?

**David W. Boyd (to Everyone)**: 2:35 PM: If we want to make a change a general statement as follows: None of the terminology in this document or its diagrams is denoted to imply any type of business or deployment model. The terms provider and consumer are placeholders for general roles.

**Frank Farance (to Everyone)**: 2:35 PM: If there were a note saying THIS DIAGRAM IS INFORMATIVE, NOT NORMATIVE, then that would help alot with the defficiencies.

**Ian Gorton (to Everyone)**: 2:35 PM: Dave's suggested change seems a good compromise

**Frank Farance (to Everyone)**: 2:35 PM: If David's statement cvould be combined with mine, that would be great.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:37 PM: That sounds ok.....informative....rather than normative......good.....& this is why we're referred to as The Sausage Factory......

**David W. Boyd (to Everyone)**: 2:37 PM: Add this to ALL 7 documents

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:38 PM: Dear Sir: Go with informative not normative......period....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:38 PM: Nope....we're good....

**Keith Hare (to Everyone)**: 2:38 PM: I can live with the words Dave has suggested, but I do not think they are needed.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:40 PM: If this minor upgrade makes the document miss it's deadline....then don't make the upgrade....

**Tim Zimmerlin (to Everyone)**: 2:40 PM: I suggest adding a caveat: "This set of related documents is a work in progress subject to extensive future changes in the next year or longer."

**David W. Boyd (to Everyone)**: 2:41 PM: If an RFP came out with this referenced as I normative standard there would be extensive protests becase this is not a STANDARD it is a Special Reprot.

**Mark Underwood (to Everyone)**: 2:41 PM: +1 Keith

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:41 PM: Dear Sir: We trust your judgement....

**Frank Farance (to Everyone)**: 2:42 PM: I can live with David's wording

**Ian Gorton (to Everyone)**: 2:42 PM: gotta go ...

**Wo Chang (to Everyone)**: 2:42 PM: None of the terminology or diagrams in these documents is intended to be normative or to imply any business or deployment model. The terms “provider” and “consumer” as used are descriptive of general roles and are simply designed to be informative in nature.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:42 PM: With this is an 'informative guide rather than a normative guide....'

**Tim Zimmerlin (to Everyone)**: 2:42 PM: I suggest another caveat: "This set of related documents should be evaluated with comparisons to the many other big data and cloud standards and public implementations."

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:43 PM: We just lost your audio...Dave...

**David W. Boyd (to Everyone)**: 2:44 PM: I muted

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:49 PM: Dear Sir: Can you off-load some ot the Item Three Tasks to those responsible folks within this WG (Work Group).....?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:50 PM: To help in getting this effort for Item Three finalized....

**Geoffrey Fox (to Everyone)**: 2:50 PM: I need to leave now. Sorry Geoffrey

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:51 PM: Dear Geoffrey:.....Have a nice work week....and drive safely.....

**Russell Reinsch (to Everyone)**: 2:52 PM: Which ppg do you need content for

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:53 PM: We need to submit our comments to Dave before Sep. 1st......David ISO 20547-2

**David W. Boyd (to Everyone)**: 2:55 PM: 20547-5 is the document. Clause 5 needs input but needs to wait for 20547-3 to firm up.

**David W. Boyd (to Everyone)**: 2:56 PM: Ok, I have to go. I have another meeting.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:57 PM: Clause 5 requires content (ISO 20547-5

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:57 PM: David Boyd: Please Note----We'll send you our Clause 5 comments

**Russell Reinsch (to Everyone)**: 2:58 PM: PW - Clause 5 needs input but needs to wait for 20547-3 to firm up.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:58 PM: Piece-meal is not our first choice.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:59 PM: We need more content for the NBD Web Site.....correct...?

**GaryM (to Everyone)**: 2:59 PM: The ogf is using redmine.. See: http://www.ogf.org

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:59 PM: Ok thanks....

**Tim Zimmerlin (to Everyone)**: 3:01 PM: Wo, let's contact Citrix about my audio.

**Tim Zimmerlin (to Everyone)**: 3:02 PM: 703 938 3251

**Tim Zimmerlin (to Everyone)**: 3:03 PM: I will go get my phone now…return soon.

**Tim Zimmerlin (to Everyone)**: 3:05 PM: Back now.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 3:06 PM: Tim: I think Mr. Chang is going to call you on your phone....?

**Tim Zimmerlin (to Everyone)**: 3:06 PM: Pw, Citrix will set up a conference call with us. Did this once before.

**Wo Chang (to Everyone)**: 3:07 PM: Tim: still calling...

**Tim Zimmerlin (to Everyone)**: 3:07 PM: Ok

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 3:07 PM: Ok....my mike is now dead, kaput.....not among the living......Good luck you all.....Respectfully yours, Pw

**Wo Chang (to Everyone)**: 3:09 PM: Tim: waiting with background music :-(

**Tim Zimmerlin (to Everyone)**: 3:10 PM: I'll wait.

**Tim Zimmerlin (to Everyone)**: 3:35 PM: I hear you.

**Wo Chang (to Everyone)**: 3:36 PM: Tim: can't hear you

**Tim Zimmerlin (to Everyone)**: 3:48 PM: Yes.

**Tim Zimmerlin (to Everyone)**: 3:48 PM: You are on the speakes now.

**Wo Chang (to Tim Zimmerlin)**: 3:49 PM: peerfect!!!

**Wo Chang (to Tim Zimmerlin)**: 3:50 PM: it is back :-(

**Wo Chang (to Tim Zimmerlin)**: 3:50 PM: perfect!!