2203908636-54220-17037-174-205

From: Marcia K McNutt <mcnutt@usgs.gov>
Sent: Wed, 4 Aug 2010 15:05:48
To: GS FOIA 0105 <foia0105@usgs.gov>
Subject: Fw: UPDATE

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Dr. Marcia McNutt

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----- Forwarded by Janet N Arneson/DO/USGS/DOI on 08/04/2010 03:05 PM -----

From: Marcia K McNutt/DO/USGS/DOI

To: "Wereley, Steven T." <wereley@purdue.edu>

Cc: Bill.Lehr@noaa.gov

Date: 05/25/2010 09:23 AM

Subject: Re: UPDATE

Super news, Steve. Any idea of what segments they have? Are they independent of what we have?

From: "Wereley, Steven T." [wereley@purdue.edu]
Sent: 05/25/2010 09:17 AM AST
To: Marcia McNutt
Cc: "Bill.Lehr@noaa.gov" <Bill.Lehr@noaa.gov>
Subject: RE: UPDATE

Marcia and Bill, on a related front, Sen Boxer's people contacted me yesterday. They know I'm on the FRTG because that fact was announced last week by Adm. Landry when the group was formed. Last week Sens Boxer and Nelson succeeded in getting BP to turn over a significant stash of images. Yesterday her chief of staff told me they had 7 TB of videos and volunteered that we could use whatever of them would be useful to us. Since it now seems that we're going to have what we need today, it may not

make sense to pursue this direction, but we might keep it in mind for the future. I've got contact info for her technical people, in case we need it.

Best,

Steve Wereley, Professor of Mechanical Engineering
Birck Nanotechnology Center, Room 2019, 1205 West State Street
Purdue University
West Lafayette, IN 47907
phone: 765/494-5624, fax: 765/494-0539
web page: http://engineering.purdue.edu/~wereley

From: Marcia K McNutt [mailto:mcnutt@usgs.gov]
Sent: Tuesday, May 25, 2010 8:50 AM
To: Franklin Shaffer
Cc: Alberto Aliseda; Bill.Lehr@noaa.gov; ira leifer; Juan Lasheras; Lori Caramanian; Peter Cornillon; Poojitha Yapa; Pedro I. Espina; pete@gso.uri.edu; Paul Bommer; James J Riley; savas@newton.berkeley.edu; Wereley, Steven T.
Subject: Re: UPDATE

Couldn't agree more, Frank. And you are right. This isn't high tech stuff. But the guys out on the oil platform who extracted the video are a bunch of roughnecks and the expertise of the engineers here at BP headquarters is in the area of hydraulics and heavy equipment. They don't know what they are doing. Bill made exactly the right call to grab all of the video so that you all can pick and choose what you want and make the call on what you want to analyze. There may be segments that aren't suitable for quantitative work but that can at least tell you whether the parts you did select are representative.

In hindsight (which is always 20-20) a better way to approach this would have been to have someone from the team come here to view all of the files, bring in video editing equipment (since there isn't any here), and do the selection for the team yourselves. Would have been a lot faster. But this is second best, even though it caused delays that are very tragic. Was this approach ever requested, out of curiosity?

Marcia

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F "Franklin Shaffer" <Franklin.Shaffer@NETL.DOE.GOV>
r
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m
:

To: "Marcia K McNutt" <mcnutt@usgs.gov>

Cc: "ira leifer" <ira.leifer@bubbleology.com>, "Poojitha Yapa" <pdy@clarkson.edu>, pete@gso.uri.edu, "Lori Caramanian" <Lori_Caramanian@ios.doi.gov>, "Paul Bommer" <pmbommer@mail.utexas.edu>, "Peter Cornillon" <pcornillon@me.com>, "savas@newton.berkeley.edu" <Savas@newton.berkeley.edu>, "Pedro I. Espina" <pedro.espina@nist.gov>, Bill.Lehr@noaa.gov, "Steven Wereley T." <Wereley@purdue.edu>, "Alberto Aliseda" <aaliseda@u.washington.edu>, "James J Riley" <rileyj@u.washington.edu>, "Juan Lasheras" <lasheras@ucsd.edu>

Date: 05/25/2010 07:49 AM

Subject: Re: UPDATE

Martha and Team,
I agree with the process Bill has chosen -- having the entire hard drives sent to him overnight. I just wanted to make two points. First that handling and editing this kind of video is not something new. We're not pushing the state-of-the-art. It's done all the time in the video industry. So it's just a matter of getting the right off-the-shelf equipment and expertise. I have been involved with some of the fastest high speed cameras that produce huge amounts of data, so I have an idea of what is available for data transfer and editing. The second point is that we need to have video samples long enough to account for flow rate variation. I'm new to the team, so perhaps this has been discussed already.
But again, I agree that Bill is doing the right thing -- getting all of the video into our hands.
Thanks,
Frank

>>> "Marcia K McNutt" <mcnutt@usgs.gov> 5/24/2010 7:08 PM >>>
Frank -

All I can say is that the last time BP extracted a subset of the video from a larger file, the quality was not acceptable to this team because in the process the file was rewritten to lower resolution. So I told them

thanks but no thanks. They don't know what they are doing. They offered to get professionals in to do it, but Bill decided he would rather be in charge. Good call.

Marcia

****
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From:
"Franklin Shaffer" <Franklin.Shaffer@NETL.DOE.GOV>
To:
"Peter Cornillon" <pcornillon@me.com>, Bill.Lehr@noaa.gov
Cc:
"ira leifer" <ira.leifer@bubbleology.com>, "Poojitha Yapa" <pdy@clarkson.edu>, pete@gso.uri.edu, "Lori Caramanian" <Lori_Caramanian@ios.doi.gov>, "Paul Bommer" <pmbommer@mail.utexas.edu>, "savas@newton.berkeley.edu" <Savas@newton.berkeley.edu>, "Pedro I. Espina" <pedro.espina@nist.gov>, "Steven Wereley T." <Wereley@purdue.edu>, "Alberto Aliseda" <aaliseda@u.washington.edu>, "James J Riley" <rileyj@u.washington.edu>, "Juan Lasheras" <lasheras@ucsd.edu>, "Marcia K

McNutt" <mcnutt@usgs.gov>

Date:

05/24/2010 06:45 PM

Subject:

Re: UPDATE

How much does the flow rate of these leaks vary in magnitude and with time? If the flow rate does not vary considerably, then we don't need long excerpts of the video. We only need excerpts that are long enough to cover a few periods of the largest variations in flow rate.

Someone from our team should be able to review a continuous, unedited video over a length of time greater than the largest variations in the leak rate. Then they can decide how long the excerpts we work with need to be. And they can pick out some excerpts that are of the best image quality.

I work with very large high speed videos all the time. If a camera is generating a large video feed, then certainly off-the-shelf equipment exists to review, edit, and extract excerpts of the large video feed. 1600 x 1200 at 25 frames per second is not something really unusual in the world of video equipment. My high speed camera (Vision Research v12) generates 1280 x 800 images at 7000 frames per second, and I have no problem working with and distributing the video files.

Frank

>>> "Bill Lehr" <Bill.Lehr@noaa.gov> 5/24/2010 6:15 PM >>>
Our guys will do whatever the team wants.

On 5/24/10 2:45 PM, Peter Cornillon wrote:

> Bill,
>
> I wonder if it would be useful for your editing guys:
>
> 1) To make a low quality subsampled video, e.g., one frame a second or
> one frame every few seconds, and
>
> 2) To break the high quality video into say 5 minute segments.
>
> We could then use the low quality video to collectively choose one or
> two reference times that everyone would use for a first estimate, and
> then, assuming that we have good agreement between the groups, we
> could choose a suite of times to sample and divide them up among the
> different groups to get a sense for how the flux varies in time.
>
> I'm assuming that the full resolution, high quality videos (2 above)
> can be saved in such a way that one can easily identify and download
> the segments of interest from the browse video. Note that this will
> not preclude looking at sections of the high quality video in the
> initial selection phase.
>
> Given that the file is too large to FTP to Seattle, it seems that we
> need to have a plan in place to efficiently select and acquire the
> segments of interest once they have been transferred. I've offered
> one alternative for doing this above. Another alternative is to have
> someone at Seattle do the subsampling/selection, but my guess is that
> the group will quickly find that they want more. Furthermore, we do
> not have the context that would have if we had a browse video.
>
> What do the rest of you think about this?

>
> Peter
>
>
> On May 24, 2010, at 4:55 PM, Marcia K McNutt wrote:
>
>>
>> Right. The problem is that the workclass ROVs record their data in
>> one large file. No EOFs during the deployments, which can last for
>> more than a day. When BP tried before to use simple tools to extract
>> segments of video from these huge files, they ended up degrading the
>> quality such that it wasn't useful for scientific analysis. Not
>> wanting to do that again, they left the entire file intact, and just
>> provided the video time codes for the sections that would be the best
>> for analysis thinking that people could just fast forward to those
>> places. However, the file itself is too large to FTP to Seattle.
>>
>> BP offered to get a professional video editing company in this
>> evening to edit out the sections that were selected and then FTP
>> those short sections, but Bill decided it would be better to just Fed
>> Ex the disk overnight to him in Seattle and let his folks there do
>> the job. That way he will have all of the data and can choose what
>> looks best.
>>
>> Another setback. Sigh :(
>>
>> Marcia
>> **
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>> Director
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>> From: Bill Lehr <Bill.Lehr@noaa.gov <

mailto:Bill.Lehr@noaa.gov>>

>> To: Ira Leifer <ira.leifer@bubbleology.com

>> <mailto:ira.leifer@bubbleology.com>>, "pete@gso.uri.edu

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>> Cc: Marcia K McNutt <mcnutt@usgs.gov <mailto:mcnutt@usgs.gov

>>

>> Date: 05/24/2010 04:41 PM

>> Subject: UPDATE

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>> Apparently the video data is contained on a hard drive with other clips
>> that are not useful and the BP folks in the Gulf do not have editing
>> capability on site. Dr. McNutt is arranging for the hard drive to be
>> fedexed to NOAA-Seattle where we have staff from some of our sister
>> groups who can edit it for us.

>>

>> In the meantime, how is the analysis going on the smaller leak? Anybody
>> have any numbers yet?

>>

>>

>

> --

> Peter Cornillon

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