From: [redacted]
To:
CC:
Sent: 3/24/2021 1:22:23 PM
Subject: Re: Request: Intro conversation regarding strike tree analysis

What calculations are being performed in the Excel spreadsheet? Did you already share it with me? (If not, could you?)

What is the Excel spreadsheet providing to the VBA script? Specifically, how does the VBA know the location of each span?

Also, in your previous email you'd mentioned that it could take ~150 hours to expand coverage of the Strike Tree model to cover all of HFTD 2/3 - is that because this approach depends on Excel? Is much of that time spent by humans interacting with Excel? (and do those answers also apply to expanding the Line Slap model?)

Has it been considered to port your Excel models and VBA scripts to Jupyter Notebook, Python, etc? Or is that outside your skill set currently?

Thanks, [redacted]

On Wed, Mar 24, 2021 at 12:25 PM [redacted] wrote:

[redacted]

The risk calculations are performed in an Excel spreadsheet. I wrote an Excel VBA script in the spreadsheet to write the results to KML file, and then used the 7-Zip program to compress the file to KMZ.

[redacted]

From: [redacted]
Sent: Wednesday, March 24, 2021 12:03 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Request: Intro conversation regarding strike tree analysis

*******CAUTION: This email was sent from an EXTERNAL source. Think before clicking links or opening attachments.*******

How is the KMZ file produced? Do you have any code you can point me to that produces the KMZ? Or do you use some particular software package or technique to produce the KMZ?

On Wed, Mar 24, 2021 at 11:53 AM [redacted] wrote:

[redacted]

Sorry I just found that I have not responded to your question regarding FEA model outputs: the KMZ format is the only output format, and there is no plan to create shape file outputs. There is talk to export the results to text file such that the data can then be imported into ArcGIS portal, but this task hasn't been formalized yet. Thanks,

[redacted]

From: [redacted]
Sent: Thursday, March 11, 2021 8:10 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Request: Intro conversation regarding strike tree analysis

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OK great!

[redacted] before you start to figure out how to proceed, we should attempt to check that your data is actually useful.

I'm going to see if the RaDA data scientists can run an analysis to see if the presence of your data (just the fraction of HFTD 2 / 3 that is currently available) improves the predictive power of our model.

You mentioned that your model produces output in KMZ format - do you have any other output formats available? In particular, do you have an output of all your results in a single file (or set of files that make up a "shape file")?

Can you send me, or point me to where I can access, all of your results?

We'll be sure to share with you what we learn!

Thanks,

On Thu, Mar 11, 2021 at 6:24 PM wrote:

I think we can accommodate this expansion. I am going to be out on Monday and Tuesday.

From:
Sent: Thursday, March 11, 2021 6:12 PM
To:
Cc:
Subject: Re: Request: Intro conversation regarding strike tree analysis

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I've discussed data and analysis with , and there is interest from RaDA in having data expanded to cover all of HFTD 2/3.

notes below that this might require perhaps 150 hours of labor - that is certainly a non-trivial effort.

I like to ask how we might approach a decision regarding if and when model results could be expanded - I'll add this topic to our Monday sync meeting agenda.

Thanks,

On Tue, Feb 23, 2021 at 11:05 AM wrote:

[Looping in

[redacted]

We've performed about 5,000 miles of the HFTD 2/3 calculations so far for [redacted]s Grid Design team. The calculations are currently setup to calculate one circuit at a time, so using the same approach the effort to calculate 20,000 miles is roughly 150 hours of labor. If you're interested in seeing more of a global effect, the calculations can be modified to calculate one region at a time which will shorten the effort and time considerably, but with the caveat that the calculated risk score will then be for the entire region as a whole. Thanks,

[redacted]

From: [redacted]
Sent: Tuesday, February 23, 2021 9:42 AM
To: [redacted]
Cc: [redacted]
Subject: Re: Request: Intro conversation regarding strike tree analysis

*******CAUTION: This email was sent from an EXTERNAL source. Think before clicking links or opening attachments.*******

[redacted] how much effort is it for you to extend your coverage? Like... if I asked for your results for ALL of HFTD 2/3 (eg. ~25,000 miles), how much work is that?

On Tue, Feb 16, 2021 at 6:04 PM [redacted] wrote:

[redacted]

The color code indicates the tree trike failure risk category at the span level:

- Red spans have more than 15 trees in each span that can break the span
- Amber spans have between 6 to 15 trees in each span that can break the span
- Yellow spans have between 1 to 5 trees in each span that can break the span
- Green spans have zero tree in each span that can break the span

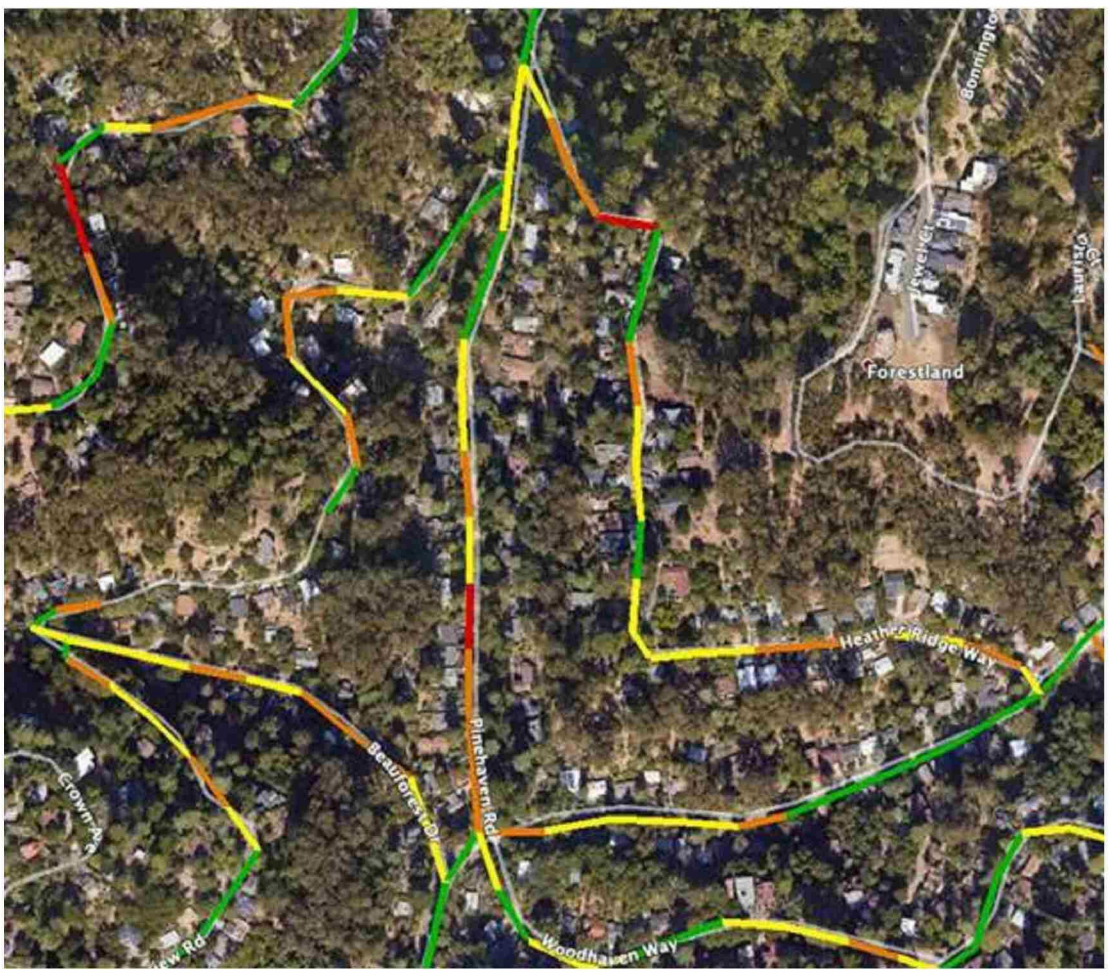
Thanks,

[redacted]

From: [redacted]
Sent: Tuesday, February 16, 2021 4:40 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Request: Intro conversation regarding strike tree analysis

Thanks[redacted], sorry for my delay in cracking this open.

Can you remind me what the color coding is indicating?



On Wed, Feb 3, 2021 at 3:03 PM [redacted] wrote:

[redacted]- sorry for the miss! The outputs are KMZ files. An example is attached (you may need to uncheck the Terrain box in order to see the outputs in Google Earth because some LiDAR elevations are not perfectly compatible with Google Earth terrain rendering).

[redacted]

From: [redacted]
Sent: Wednesday, February 3, 2021 2:20 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Request: Intro conversation regarding strike tree analysis

Thanks [redacted]

In what form do you produce the results of the calculations for the circuits below?

[redacted]showed me some color-coded visualizations in Google Earth - did those come from you?

Are you producing KMZ files? Shape files? Raster files? CSV or other tabular data?

Could you point me to a sample of your calculation results?

Much appreciated

Cheers, [redacted]

PS. My first name is [redacted] last name [redacted] backwards, I know!

--
[redacted]

[redacted] PG&E

[redacted]

On Mon, Feb 1, 2021 at 5:53 PM [redacted] wrote:

[redacted]

Adding to [redacted]s PSPS work scope, similar calculations have been performed on about 70 distribution circuits (HFTD 2/3 areas) for [redacted] system hardening scoping projects:

ALLEGHANY 1101	DESCHUTES 1104	KESWICK 1101	MOUNTAIN QUARRIES 2101	PUTAH CRE
BANGOR 1101	DIAMOND SPRINGS 1105	KIRKER 2104	NORTH DUBLIN 2101	RINCON 110
BIG BASIN 1101	DIAMOND SPRINGS 1107	KONOCTI 1102	OAKHURST 1101	RINCON 110
BIG BEND 1102	DUNBAR 1101	LAS GALLINAS A 1105	OLETA 1101/MARTELL 1101	SHINGLE SP 2109
BRUNSWICK 1103	DUNLAP 1102	LOS GATOS 1106	OREGON TRAIL 1103	SILVERADO
BRUNSWICK 1110	ELK CREEK 1101	MARIPOSA 2101	PINE GROVE 1102	SILVERADO
BUCKS CREEK 1101	FITCH MOUNTAIN 1113	MARIPOSA 2102	PLACERVILLE 1112	SILVERADO
CALISTOGA 1101	FROGTOWN 1701	MIDDLETOWN 1101	PLACERVILLE 2106	STANISLAUS
CALISTOGA 1102	FROGTOWN 1702	MIDDLETOWN 1102	POSO MOUNTAIN 2103	TIDEWATER
CAMP EVERS 2106	FULTON 1107	MIDDLETOWN 1103	POSO MOUNTAIN 2104	TULUCAY 11
CLAYTON 2212	HALF MOON BAY 1103	MIWUK 1701	POTTER VALLEY P H 1105	UPPER LAK
COARSEGOLD 2104	HIGHLANDS 1102	MIWUK 1702	PUEBLO 2102	VACA DIXON

Thanks,

[redacted]

[redacted]

From: [redacted]
Sent: Monday, February 1, 2021 5:47 PM
To: [redacted]
Cc: [redacted]
Subject: RE: Request: Intro conversation regarding strike tree analysis

Just select distribution circuit segments that are begin identified for PSPS de-scoping at this time.

From: [redacted]
Sent: Monday, February 01, 2021 5:44 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Request: Intro conversation regarding strike tree analysis

Very nice!

For what coverage area is this model's results available? All of HFTD 2 and 3? Or only the potential PSPS descoping areas being considered? Or some other extent?

On Mon, Feb 1, 2021 at 5:41 PM [redacted] wrote:

[redacted]

This work is part of the PSPS descoping criteria. Wen's team builds a mechanical simulation of the distribution line and then uses the LiDAR tree data to identify which trees can reach the line. The simulation then models those trees falling on the line and the results indicate whether the tree is likely to break the line or other components of the line.

[redacted]

From: [redacted]
Sent: Monday, February 01, 2021 5:00 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Request: Intro conversation regarding strike tree analysis

Ah, well, I wonder if perhaps I already know about your model [redacted]

I work for and closely with [redacted]:)

[redacted] today [redacted] showed me a great presentation about your strike tree analysis work - could you share it with me?

[redacted] can you help illuminate things here? I'm sure I'm missing something simple with regards to understanding [redacted] work.

Thanks, [redacted]

On Mon, Feb 1, 2021 at 4:53 PM [redacted] wrote:

Hey [redacted]

Happy to share. The model we developed is being utilized by [redacted] and his PSPS descoping model and some other purposes. Plugging in [redacted] so he is aware of the ask.

What times are available for you?

Cheers,

[redacted]

3400 Crow Canyon Rd, San Ramon, CA 94583

From: [redacted]
Sent: Monday, February 1, 2021 4:47 PM
To: [redacted]
Subject: Request: Intro conversation regarding strike tree analysis

Hi [redacted]

My team develops wildfire risk models for PG&E - you can learn more about us and our work here https://wiki.comp.pge.com/display/RaD/Risk+and+Data+Analytics

I recently became aware of your work on analyzing tree data (from PG&E's LiDAR surveys, I believe) to inform [redacted] System Hardening work planning.

My team would very much like to learn more about your work - would you have time to share some details with us? Just a half-hour would be great!

I'm happy to schedule a mutually-available time.

Please let me know, thanks.

Cheers, [redacted]


PG&E