

Meeting Notes

Texas Data Center Services

Geographic Information Systems Solution Group Meeting

April 2, 2019 • 2:00 pm – 3:30 pm

Texas Department of Transportation

118 E Riverside Dr. Austin, TX 78704

TPP Conference Room A – 2D-01

Conference Number: 1-877-873-8018 Access Code: 3298261

Web Access: [Join Skype Meeting](#)

Meeting Chair: **Richard Wade**, TWDB/TNRIS – Chair; Ed Kelly, DIR – Co-chair

Participants: **Raj Nadkarni**, Jennifer Kirby - TCEQ; **Scot Friedman** - GLO; **Monica Watt**, Vonda Payne - CSEC; Felicia Retiz, **Gayla Mullins**, Ilyanna Kadich - TWDB/TNRIS; **Chris Bardash**, **Travis Scruggs**, Jeremy Rogers, **Jonathan Martin**, **Michael Chamberlain** - TxDOT; **Jeremy Nobles**, TPWD; **Carrie Davie**, Capgemini; **Jessica Chen**, **Maurice Krollman**, AppGeo; **Jennifer Neutzler**, **Tere Shade**, **Chad Lersch**, DIR; **Kyle Campbell**, **Jack O'Connell**, Google

Agenda

Welcome and Introductions	Richard Wade
Google Discontinuation Q&A	Kyle Campbell, Jack O'Connell (Google), Maurice Krollman (AppGeo)
Replacement Strategy Discussion	Group

Notes:

Welcome and Introductions (Richard Wade)

- Recap from last meeting: Google is discontinuing online map service that has been used the last 3-4 years, a surprising and recent announcement. High level overview provided in previous session with a Q&A for today.



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Google Discontinuation Q&A (Kyle Campbell, Jack O'Connell, Maurice Kholman)

- Late last year, the Geo team received notification that the engineering group working with imagery was being reallocated within Google. Process has been somewhat manual, and alternative options were investigated to work around the loss of the engineers. Permission was granted to use Tile API for State of Texas, but even that API required some manual effort to cut data and provide quality assurance. Collaborated across Google work streams to try finding a means of continuation, and Google's geo team was fractured as a result. Ultimately, engineering agreed to continue supporting state customers until 12/31; State of Texas has a special concession for support until September 2020 ("business as usual").
- All content is owned by the State of Texas and can be downloaded to store on premise or continue to be stored in Google's Cloud.
- Question: Was it a financial decision by Google (not generating enough revenue) or a change in direction? Will there be follow up with new flights between now and 2020, such as ensuring the three-year window for updates?
 - Kyle: Not as much a financial decision as a resource and budget issue. Engineers around the globe are being reallocated. One Google VP is not a fan of selling data, and some philosophical and political viewpoints are affecting the decision. Kyle has emphasized to leadership that states operate differently, especially with regard to ownership of data.
 - Jack: No indication to any users that this was likely to be on the chopping block. Some products raise conflict amongst Google teams, and much effort was made to save the program. New executive leadership of Google Cloud team offers some hope for future options and opportunities.
 - Kyle: On three-year window for updates. Methods of collecting imagery have changed; some people feel like the captured images are not being viewed or utilized, particularly in lower ranges. Around the US, three years is not the norm anymore—some lesser areas are four-five years, focusing on high priority regions. That may be an issue of concern for CSEC.
- Question: Will the cost be adjusted to account for that shift in time frames, since the original contract indicated the three year update?



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- Tere: If the contract terms change, the contract will need to be adjusted.
- Question: In consideration of each image having a value, will Texas Imagery still receive \$1MM value of imagery in 2020?
- The conversation will need to return to DIR to determine whether we can proceed, especially considering the shift in support level and valuable output.
- In the original time period for Pilot 1 and 2, Tere had to create partial month/quarter invoice charges. A similar method would allow us to capture the value of the images. Concerns were voiced about the expenditure versus the value, especially going forward on the limited support structure.
- Kyle: Access to Tile API is a special concession (typically a million dollar investment, even for corporations), which brings some additional value.
 - Texas has good negotiators who secured what we needed! We still need to ensure that we have a commitment from Google to meet the requirements of the initial contract, particularly on the less trafficked areas that were meant to have three year flyovers. The group will need to review requirements and expectations to present to Google for consideration in how to address (e.g., decreased fees).
 - Google is attempting to provide as much time and assistance as possible to Texas, the largest state customer, and Kyle will take cost concessions back to Google leadership.
- Member: What's the reality of what can be offered in the next 12-18 months? Some of our areas haven't been flown over in five, six years, so it seems unlikely that the already out-of-date areas will be completed in this time frame.
 - Kyle: Let's identify those gaps specifically, and I can take them back. Many teams come together to complete the work.
 - Contract modifications would need to be submitted in May for Tere to have time to run through the appropriate channels, and financial implications will need to be reviewed to account for the decrease in service.
 - Kyle will provide a gap analysis by May 1, 2019, to identify differences between the existing contract and new support structure, including price considerations.



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- Member recognition and appreciation of Kyle's efforts to save the program.
- Google is updating the back-end of Maps to increase automation of processes, and some systems are moving to a new platform (late next year). Kyle and Sean are seeking paths to keep Tile API updated instead of falling out of support. Google Earth Engine is a research-based feature that also needs Tile API internally, and they may be able to fund its maintenance and updates to suit the new back-end.
 - Current TX Maps application is considered "derivative" because it is used in additional applications rather than flat data. A charge will occur for the use of the data at the derivative level. Derivative Tile API only exposes Google-owned content, while other components within Maps are not owned by Google and cannot be provided for derivative work, so the extra layer of the API is required. For example, Google does own the obliques and street view, but not the satellite images.
 - This tool shift would fall under the new contract post September 2020, assuming the pieces come together correctly. Pricing would shift accordingly.
 - Google Imagery on its own will continue to have merit for the six inch images; member request to consider reduced rates to access it as-is instead of adding in flyover demands.
- Reiteration from Google that this has been a successful five year run, and the team is surprised to see the program not being continued, especially after gathering momentum with not just state but federal projects.
 - Members: The project has put a spotlight on service and ease of use for the State, and we've also been able to mature our vision. It's helped us stay focused and moving forward. We appreciate the open communication and efforts of the Google team as this shift happens. The evolution has also educated and inspired customers.
 - Members shared positive stories about practical applications—identifying dumping locations, dam maintenance, post-hurricane imagery.
- Early 2019 Flights (awaiting confirmation): Hollis, OK; Brackettville, TX; Hebronville, TX; Pecos, TX; Seminole, TX; Brady, TX; Palestine, TX; Uvalde, TX



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- New flights this year in preparation: Bowie, Mt Pleasant, Pleasanton, Houston, El Paso, San Antonio, Texarkana (some from the 2014 list, three from 2015)
- Request to follow up on other outstanding locations: Corpus, Brownsville, Tyler
- The four major urban areas are generally updated twice a year.
- Question: Secondary Product is use-only, no download?
 - Kyle: If we can get Google Earth Engine to maintain the Tile API, you will still have the ability to pull them down.
- Question: Will there be changes to the Google Maps API platform?
 - Kyle: Undergoing major change in the way it's consumed by end-users. Used to have a monthly cost and is now pay as you go as of Halloween 2018. It's in the same console as the Cloud products. Trying to be cognizant of government need to pay with POs versus a credit card. Current focus is moving to the new platform—Street View is expanding wildly, which is why the engineers got pulled.
 - Jessica at AppGeo: Giza is still alive and fully supported, no matter what happens with Imagery.
- Dismissal of Google and AppGeo team with appreciation: Tentative plans to connect with updates

Replacement Strategy Discussion

- Great meeting with DIR last week to review options, including Hexagon (recently reviewed with Randy).
- Positive experiences so far with the Ledge for StratMap. \$3MM biennium that could go towards creating our own state-wide product using one foot (instead of half-meter), with some areas at six inches. Consulting with StratMap vendors. First year may incur a cost but would ultimately lead to potential vendor licensing in the future. Investigating options around how flights work with height versus resolution of captures.
 - All imagery we get is processed and managed through Giza (managed by AppGeo, who is also in talks with Hexagon for integration).



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- Gathering early cost estimates from StratMap vendors for one-foot across the state and 6-inch buy-ups.
 - Some vendors could have the potential to expand their imagery content programs.
- StratMap account funding of \$3MM can be shuffled to have increased capital in one year, but it may extend the time between flyovers to do so. Ledge is supportive of creative accounting to apply the funding from the account, allowing GIS to bank the funds needed to accomplish goals (per the LAR).
 - TXDOT may be able to contribute more funding drawn from unspent allocations.
 - CSEC, GLO, other Agencies may be able to pool together funds sufficient to build a program that works for everyone.
 - From DCS/DIR perspective, most Agencies are locked to the amount defined by the Ledge, and it's unlikely to adjust those budgets until the next LAR or LBB (two years away).
- A possible solution is to license with Hexagon for one year as a carryover.
 - Concerns about utilizing Hexagon, whose flyovers are already fixed and won't be updated for another two years.
 - Could we leverage NAIP instead? Some issues with NAIP accepting state funds as well as their leaf-on schedule.
- Discussion around defining the boundary box of a city (Google defined it as 850k population) and cost of imagery based on pixel-size in conjunction with refresh rates.
- If we revisit the Google contract, can we add an inclusion that we own all of our content?
 - Already included in existing contract but would like to put in the public domain.
 - Does not appear to be an intent to move it out of the Google Maps platform or break with AppGeo. Simply need the capability to update that data after the support ceases.
- Discussion around struggle to find cost-effective six-inch imagery.



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- Frustration when doing analysis that shifts from one county/region to another and the view changes from six-inch to a foot.
- Ideal situation would allow us to merge the Google images with our new StratMap independently contracted updates to the locations that aren't getting flown over, preferably at the same resolution.
- Decisions need to be made within the next 18 months to 2 years, giving a little lead time to find funding.
 - Chad provided support of DIR to GIS to determine the best path forward.
 - Team will pull together the plan, take it to DIR, and start "passing the hat." Encouragement from the team to include AppGeo in the conversations.
 - Intentions to put out RFIs to vendors and pull together a workshop to devise the strategy and plan going forward.

Next Meeting: May 7, 2019, 2:00 to 3:30 PM

