

DISA-OTA-20-R-TardyS3 “Ask Me Anything” Event Q&As

1. The following questions were submitted during an “Ask Me Anything” event hosted for RFI respondents. The Government’s responses are provided below:

Question	Answer From Kasey Pugh (TARDyS3 Program Manager). *All First Person responses are from Mr. Pugh
Can the government clarify how it intends to utilize Platform One?	The Platform One Party Bus service offering will be used to stand-up IL-5 development and test environments for the TARDyS3 developers to use. Platform One is a government organization and will be funded through an interagency agreement established by the TARDyS3 government program office.
Can the government clarify the cross-domain operational need?	Both the spectrum scheduling system (S3) and interference prevention, detection, resolution (IPDR) capabilities will need to support DOD user data entry into an IL-5 and IL-6 environment. Data entered into the IL-6 environment may necessitate an event message sent to a non-DOD commercial entity at the IL-2 level. This event message must be generated and sent autonomously in a timely manner (e.g. within 300 seconds). Event message responses may then be received from the non-DOD commercial entity through the IL-2 environment and must be passed up to the IL-6 environment for potential action in an equivalently autonomous, timely manner.
Are the applications going to run through Platform One? Do you anticipate any customization for other environments?	Applications will go through Platform One. Following award, the vendor will go through Platform One onboarding. As for customization, most likely. We need to be able to touch test range users that don’t necessarily have access to cloud. Might need to push a local environment or instantiation to their local site environment or figure out the connectivity to our main app.
Do you need/want the resulting solution to be "cloud flexible" given the uncertainty on where DOD/IC writ large will be going? We have been building to both Azure and AWS because of this inconsistency so wondering if you have a preference?	Preference is cloud native. It should be abstracted to maximum extent possible. We don’t want to get locked into one cloud or the other
Can you clarify whether the requested Rough Order Magnitude (ROM) includes the completion of the Minimum Viable Product (MVP) or Minimum Viable Capability Release (MVCR)?	Have not provided a ROM at this point. Will be clarified in an RWP.

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<p>Is this effort associated with a Program of Record or is it being executed in parallel with an intent to merge into a PoR at some point in the future? Are there "mission partners" involved so that we have access to user inputs and needs in determining the solution? (i.e. the Combatant Commands)</p>	<p>TARDyS3 is not a Program of Record. Instead, it is executed with the Spectrum Relocation Fund.</p> <p>Mission partners will be test range users for mission scheduler, who will have a stake in this to request interference protection to protect their operations. Will be US&P specific</p>
<p>I heard you say that there is a requirement to auto-send a message from IL-5/IL-6 to IL-2 within 5 minutes. Did you say there is also a requirement to auto-send a message from IL-2 to IL-5/IL-6 within 5 minutes?</p>	<p>Once it comes in from IL2, that pass up should also be within 5 minutes. Preferably less.</p> <p>Going from high to low is going to be the more challenging piece. The non-deterministic component of that will be the SAS response. We can get a message out to a SAS but haven't had that determination with the SAS admins yet for once we get them a message. Once we get the response from them, we want to be able to pass that up in a timely manner.</p>
<p>We have existing, deployed solutions that are in the field performing broad based "spectrum awareness" from the edge to the cloud. I recognize you are "building from scratch" but presumably would want to leverage these existing, government open, unlicensed, non-proprietary solutions?</p>	<p>Yes -- Along those lines feel free to send any additional info</p>
<p>We understand prime needs to have FCL. We also understand non traditional defense contractors without FCL has a good role to play on this contract. Like other OTAs do you plan to bring together the right team of companies together to get the right solution? For example directing a non traditional to a potential prime.</p>	<p>We are completely open and encourage teaming where it makes sense. We welcome thoughts on how to best do the teaming arrangements. This right now is an opportunity for you all to identify yourselves with other interested parties and vendors.</p> <p>I'd like you all to email me with ideas on how to get a vendor together. The Primes that might have an FCL or you might want to partner with and get together offline.</p>
<p>This is one of the question in the invitation "A Rough Order of Magnitude (ROM) of hours, labor categories, tools, software, hardware, etc. to achieve mission success". My question was what is the scope</p>	<p>It would be the duration to mission success where mission success would be defined as the MVCR</p>

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of this ROM. Is it to cover just the first MVP or duration of the OTA?	
Can you explain or give an example of how the challenge based acquisition will work with this effort?	<p>The expectation is demonstrating existing capabilities from the perspective of the company. These include things you can develop or already have in a way that reduces program execution risk. We have three major rocks for this effort: DevSecOps, cross domain solution challenge space (5 min pass down up), and then spectrum specific SME (understanding the data and understanding what to do with it from an interference perspective). The spectrum piece also includes parsing interference reports. Those are the 3 major topic areas that we would like to pull out from assessment perspective through the ChBA.</p> <p>One of the major goals with it is reducing execution risk from our perspective. It also changes the nature of the proposal, reducing the time investment on writing a good paper proposal and focusing more from a vendor perspective on showing and doing what you do already. Having a 1-2 hour demonstration of your DevSecOps process. Running through your sprint planning. Running through your execution how you manage in a sprint and do retrospectives and pass back at the end of a sprint.</p> <p>The specific challenges are to be shaped based on the RWP process</p>
Can government give any information at this time as to size and number of awards?	No
Has a decision been made to utilize ChBA vs OTA vs any other contract vehicle? If ChBA is chosen, will it be prize money driven? or initial contracts with down selects to future phases based on performance?	<p>The intent would be to utilize ChBA within the OTA construct. There is a white paper with everyone’s initial takes and ideas. The Government will use those whitepapers to down select to what we consider to be the best ideas at that point. We will then use the ChBA to down select again to one or a small number of vendors to go into the RFPPs.</p> <p>There is no prize money – the reward for winning the challenge is the contract itself.</p> <p>Initial contracts with down selects to future phases -- probably not. The specific implementation and approach that we would apply here is all TBD. We do look to you all to help us shape that.</p>
In the RFI, there is a statement, saying that the intention of the system is for scheduling and	More towards the latter but to clarify. There are two uniquely distinct products or apps. One is interfacing with the test ranges and that is the spectrum scheduler. For this capability, the

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<p>interference prevention, detection, and resolution capability. Is this referring to an interference in scheduled spectrum activity, or to identify and locate interference sources, with a system to aid spectrum managers in resolving these incidents?</p>	<p>range manager goes in and says "I need to use 3550 to 3570 from 8 AM to 12 PM" and gets populated on a calendar. That artifact then gets sent over to (schedule objective) to a SAS admin to provide the protection. That's one capability.</p> <p>The other is the interference prevention, detection, and resolution piece. This will apply to all DoD users within the band. 3550 to 3650 users would use this capability to report interference. The system would have to go interface with a SAS (all the SASs) to resolve that interference event. Some of that what they do to resolve will have to be worked out with the SAS admins. What the data exchanges need to be is TBD at this point (This includes what info do we need to pass to the SASs and what info will they pass back). There will be an investigation piece on their side of this, such as a root cause analysis type approach. Once an interference event in an area is identified, everyone looks, one SAS admin identifies the cause, that SAS reacts and does something to that anomalous event, and the SAS reports that they have resolved the event. DoD user reports back to confirm resolution.</p>
<p>What is the typical formatting on the payload (JSON, XML, CSV/other binary data/etc.)? Is the winning bidder going to support development of both the "low" side and "high" side systems?</p>	<p>Typical formatting is TBD and negotiable at this point with the SAS admins. They all use JSON primarily for transferring data between themselves.</p> <p>Development will be required on both the low and high side.</p>
<p>Which government spectrum management systems, if any, do you envision interfacing with?</p>	<p>This is a TBD at this point. I don't have commitment from other PMs at this point that we would want to interface with.</p>
<p>We commonly work in a government open environment with large groups of companies collaborating for the endpoint solution. Do you see the possibility of building this type of "consortium" under the auspices of the NSC to execute in this manner?</p>	<p>Possible but highly unlikely with time, speed, distance required to stand up that type of consortium model given our delivery commitments. I would like to say 'yes it's a possibility,' but time constraints might stop that.</p>
<p>How will vendors building the spectrum sharing scheduler work with vendors or services in the Air Force Cloud One contract?</p>	<p>The 6-9 month timelines were the two products. 6 months is the spectrum scheduler and 9 months is the IPDR capability. From a cloud perspective the Dev/Test is integrated with PLATFORM 1 party bus. This will include a 6 week onboarding for PLATFORM 1 with the awarded vendor(s) working directly with the PLATFORM 1 team to integrate with their</p>

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<p>Clarification: When we looked at the info that has been put out, there is a dev effort for cloud resources. Dev effort on schedule. Cloud resources at 6 months. Scheduler at 9 months. Are those in tandem or serial? How do you see the cloud effort working in parallel with the scheduler and business logic side of it</p>	<p>people and tool set. The vendor will go through a 3 week cohort on indoctrinating into how they view CI/CD and walk through test driven Development, their approach to extreme programming, approach to user centric design, and additional topics. They will bring you up to speed on how they work and then they will work with the product team to build a web app MVP using node.js. At the end of the 3 weeks, the product team should be able to walk through the entire CI/CD process and push code to the Dev-Test environments with party bus.</p> <p>The production piece would be done likely post 6 months and 9 months so that MVP subject to the ability to interface with end users, would be done in the Dev-Test environments. If those environments are sufficient to be able to deploy an MVP with the actual users we need feedback from, then that 6 – 9 month target would be covered by that initial 6 week onboarding.</p>
<p>Are there any cross domain solutions you are considering for the project?</p>	<p>Yes, but we are open to any and all suggestions that you all might have to meet that autonomous push down and up from IL6 to IL2 and vice versa. DISA does have an enterprise cross domain solution that we are looking at. If it doesn't meet the need then we'll have to explore other options.</p>
<p>Regarding the CDS, does the government expect to build and accredit a CDS as part of this effort, or is there a existing CDS the government is planning to utilize?</p>	<p>Open to any and all solutions. A government CDS that is there should meet the need, unless it can't meet the 5 min requirement.</p>
<p>Can you describe the architecture of the legacy calendar-based spectrum portal?</p>	<p>The legacy portal is Google calendar, so that follows whatever google calendar's architecture is.</p> <p>Google is one of the SAS admins, when we were working through this problem as a stop gap measure one the Google engineers went and customized an app, interfaced it with other SAS admins, and worked out the commercial side. When it had to include DoD users, the DoD users live in DoD networks and couldn't access the calendar. It was a nonstarter. I wouldn't get wrapped up around porting it necessarily.</p>
<p>You mentioned interference reports. What is the source and format?</p>	<p>Initial source is Navy users, at what level is TBD. If interference occurs on a ship, ideally from an interference reporting period perspective, the person closest to the initial impact of the source is going to be best to report it. A radar operator seeing interference on their PPI is</p>

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	<p>going to be the first to notice the interference. The radar itself will be the number one priority. The first human to see it will be the radar operator. Those people are on ships submitting the reports. They also have mainline missions and are focused on radar monitoring activities. They don't have time to step back and submit a report of interference. That operator may verbally communicate to someone else who has the ability to do the report. Who that other person is (who submits the report) is TBD. It could be someone else on the ship or it could be a person on a shore site. That will be something that can be learned through user discovery and interacting with Navy partners. Who is submitting these reports will drive the formats. For example -- A radar operator might only have two seconds to report interference – if so, that will shrink the format. So in 2 seconds, that person would push a button. Onus will be on the TARDyS3 program to meet that user need of being able to submit a report in 2 secs. Within the Requirement is also to communicate sufficient info to the SAS admins, so that they can actually do something about the event. The specifics are TBD, but likely a human and a very minimalistic format that has yet to be defined.</p>
<p>In the Government's description of the reverse industry day, it appears that the Government wants industry to propose scenarios. Isn't scenario definition typically a Government function/responsibility? How do vendors know what capability they would like/choose to demonstrate if the Challenge or other ChBA scenario has not been defined/released/revealed? Can the Government release any additional information defining its concept for scenario(s)?</p>	<p>Truly what we are asking is: based on your capabilities and skill sets, what would you be most interested in demonstrating through a ChBA? It is ultimately a Government responsibility to define those ChBA scenarios, and you will get a first look at those scenarios ideally before the request for white papers.</p> <p>In trying to arrive at the most practical ChBA scenarios, we look for your input on the types of capabilities that you think would provide the most value and utility through to the procurement through ChBA.</p>
<p>Is there a current CI/CD pipeline that needs to be accounted for?</p>	<p>The CI/CD pipeline is Platform 1. This is an Air Force Program office that provides enterprise services to DoD program offices for utilization and consumption. The TARDyS3 PMO will interact with the PLATFORM 1 PMO folks, establish an agreement, and then transfer funds (funds transfer will be govt to govt) for PLATFORM 1 to provide pipeline service support for our product teams.</p> <p>Platform 1 has an Ask Me Anything event. I will send out the link to their FAQs. PLATFORM 1 is fairly open, as far as documenting and explaining what they do and</p>

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	<p>providing as much info to the general public as possible. There is a lot of good info on their website that would answer that question better than I could.</p> <p>More information on Platform 1 can be found at: https://software.af.mil/dsop/documents/ https://software.af.mil/dsop/frequently-asked-questions-faq/</p>
<p>Can you clarify the operational context of Geo-location?</p>	<p>One thing about IPDR is a need to obfuscate location. Because this is interference that could be happening on afloat ships. Navy ships that are underway may not be able to release their location to an IL2 environment. When interference occurs, that IL6 to IL2 interface will need to obfuscate the location. It will need to abstract that location in some fashion. In CBRS, location is done by defining a standard grid of block locations. Dynamic protection areas are outlined, and that abstraction could be done through those means. It also might make sense to subdivide or change those geo location blocks. No matter how we do it, that IL6 to IL2 interaction needs to abstract the geo location out.</p>
<p>Can you confirm if there are limitations to the number of people that can participate in the Industry Day from the Vendor’s side?</p>	<p>No there are no limitations.</p>
<p>For demonstrating and the Government possibly acquiring existing vendor capabilities, what Technology Readiness Level (TRL) target is the Government requiring?</p>	<p>We have not talked through that, so it is TBD.</p>
<p>What identity providers are supported on low-side for potential commercial and DoD users? Which are allowed on the high side? IdP examples include SaaS like Okta, Auth0, or Keycloak, ADFS, C1 solutions like GCDS, etc.</p>	<p>We do not have a strong position either way. The Government is open to any and all, and it will be driven by the Authorizing Official and their comfort level for different SAS offerings. PLATFORM 1 right now is migrating to Keycloak.</p>
<p>How is the relationship with Platform One expected to be managed after the 6-week onboarding? Will government product owners engage with Platform</p>	<p>I view it as a 3 headed partnership at that point and throughout. You’ll have a Government product owner, selected Development vendor, and the PLATFORM 1 representative all working together.</p>

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One directly? Or will the selected vendor be primarily responsible for managing the relationship?	
Will DISA provide invited companies an opportunity to test the MS Teams connection in advance of the reverse industry day?	This AMA event is the test for MS Teams connection prior to the reverse industry day. If you are able to chat right now, that’s 90% of the planning. I do have this event locked down, so that folks cannot present. For the Reverse Industry Day, that won’t be the case. We’ve already tested with the team with guests being able to present.
How does the TARDYs3 interference reporting, analysis, and resolution capability differ from DISA's operational Joint Spectrum Interference Resolution - Online (JSIRO) system?	<p>The delineation is who the system is interfacing with. DISA JSIRO is specifically designed for a joint operational concept. For Combatant Commands, it is for outside of the US. So, JSIRO is between and for DoD users. It never had to create the connection to a commercial IL2 type environment. That’s the primary difference with our IPDR: having to have that cross domain functionality (IL6 to IL2 and vice versa).</p> <p>We also need automated transactional workflows to support in this band. Traditionally, interference resolution it was done in an ad hoc fashion. For example, a Navy operator would interfere with another Navy operator, and they would be able to work it out real time. Now it is a shared environment with nontraditional equities in the band: Nonfederal commercial networks, primarily LTE type networks today, that are expected to move to 5G new radio (NR) non-stand-alone to stand-alone.</p> <p>So being able to support that same user experience of being able to resolve interference in a fast fashion with the complex ecosystem is our burden. How to enable an ad hoc user experience for interference resolution with an entire commercial ecosystem on the other side of the equation -- that has not been done in JSIRO.</p>
Is this only an issue when ships are under-way? Are other Armed services running into this issue in other deployment patterns?	So, the ships being underway is primarily driven by the DoD equities in the band. Because this is SRF funded, our capability is specific to 3550 to 3560 MHz. The primary DoD equities are Navy in that band on ships. Most interference is expected when the ships are off the coast conducting test and training exercises and actual operations. They do come into port, and we will have to deal with interference and scheduling there too. There are some US Marine Corps impacted radars that will need to be accommodated, as well. The primary issue will be the Navy ships and supporting their interference resolution process.

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<p>Are you expecting to use other services that are not currently provided through Platform One for the Production implementation or is the idea that the Production instance will mirror the services used to develop the MVP?</p> <p>Clarification: To clarify that question PLATFORM 1 offers certain services CI/CD pipeline and cloud services. The idea that the MVP that the PLATFORM 1 is developed will the same services be used for the production implementation.</p>	<p>Yes</p>
<p>When will the RFP be released?</p>	<p>TBD</p>
<p>In the case of an interference report, who would have the responsibility/authority to move reports to resolved states?</p>	<p>That would be the initial reporter, who will have to verify. The workflow is that once the interference is said to be resolved, the initial reporter will be responsible for verifying that it is resolved. That reporter would be pinged to verify that the interference is gone. Its TBD what we'll have to do if there is a non-response. If after one week or two weeks then it might not be that big of headache, so we may move it to “resolve” status or “inactive” status.</p>
<p>As part of the ChBA, how much time do you expect vendors will have to respond to the scenarios?</p>	<p>I don't think we've written that hard in stone at this point. It depends on the specifics of the scenario and how we end up exercising DevSecOps through ChBA We've seen these presentation events to be around 1-4 hours depending on complexity. A lot of that could be in the form of an oral discussion that walks through problems, capabilities, and ideas -- so not necessarily 100% of that dedicated to specific challenge resolution.</p>
<p>You mentioned a running a ChBA through an OTA. We are currently executing something similar. The government is funding the performers for the demos - is this your intent as well?</p>	<p>We do not plan on doing that approach. One thing we would like input on is how to best balance that value from a commercial perspective. From our perspective we want to make the challenges as light weight as possible so that from a commercial perspective, it's not a huge investment. It should be things you are already doing and showcasing how you are getting after those three big rocks: The DevSecOps, spectrum SME, and cross domain solution space. It should be light weight and we would like your input on how best to get after that.</p>

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<p>From the invitation "We've identified topics and focus areas for Reverse Industry Day discussions in the attached invite; however, DSO will reach out to you next week with additional questions that are specific to your RFI response. " When can we expect the additional questions?</p>	<p>Vendor specific questions should be out by COB 24 July. Objective is 23 July.</p>
<p>Will the government support on-ramping of any contractors to OTAs in advance of issuing any RFP or conducting ChBA if their solution is unique and offers a compelling reason to do so?</p>	<p>For this, the expectation is to issue an RWP that would then go through a down select process, followed by a challenge phase. Challenges would enable another down select process and then RFPP phase would follow that second down select. And that would be done through DISA's OTA. So there wouldn't be an on ramping of contractors to a consortium type OTA. DISA has it's own OTA authority.</p>
<p>Should you move to ChBA, how long would vendors have to configure and perform the demos? is this a weekend-type hackathon? Or something like a 1,2, or 4 week effort?</p>	<p>That's again TBD and something that we would like input on. Our initial expectation predicts a 4-week preparation time, depending upon the scenarios and how they are configured. There could be a scenario where we do a quick coding event, and we would love input on any vendors that have been through events like that. Otherwise it will be more along the lines of a 4 week preparation, and then we would conduct the challenge over a couple of hours.</p>
<p>The gov't has discussed 3 areas to reduce risk which are DevOps/DevSecOps process, spectrum Expertise and Cross Domain capability. Does the gov't find value in usability as a measure of success through proven User Research and User Experience best practices?</p>	<p>Yeah, that's actually one thing I've batted around in my mind as a 4th area. I've convinced myself it falls under the DevSTBDcOps process area. My personal view is that's a critical element of the DevSecOps environment. It's foundational on how they interact with that capability. Yes I find substantial value in user research and user experience, but we'll bundle it in the DevSecOps piece.</p>
<p>How does DISA plan to conduct the ChBA, considering the current COVID-19 situation (on-site/virtual)?</p>	<p>We intend to conduct the ChBA virtually.</p>
<p>What is the maximum number of participants allowed for the ChBA?</p>	<p>TBD</p>

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What are the technologies currently provided by DISA for development (and for the ChBA)?	Information relevant to answering this question will be released at a later date.
Will you have any preference on technologies and process used during the challenge?	TBD
What are the current challenges faced by users in accessing the commercial calendar web application?	Users are unable to access the commercial calendar web application due to network policy restrictions and inability to utilize a cell phone for multi-factor authentication.
How frequently are high-to-low CDS data transfers expected to take place?	The current expectation is that multiple transfers will occur per day
How are high to low information exchanges handled currently with the Google based calendar solution?	They are not; the Google-based calendar solution only processes IL-2 information.