



Comments Received
Bottleneck Facilities Consultation: 1 June – 25 June 2021

#	Question	Commenter	Comment
A	Do you agree with the proposition that submarine and terrestrial fiber communications facilities are bottleneck facilities as defined in the Act?	FSMTC	<p>It depends on how you define a bottleneck facility, and whether it is already in use or is possibly to be built in the future.</p> <p>The issue of declaring all submarine fiber communications facilities as bottleneck facilities is not possible at this time, due to the fact that for the current time there is no underwater cable to Kosrae, and no underwater cable may ever be laid. The current EMC project was halted, and all contracts had to be re-bid, which means per OAE that the cable at the very earliest would be operational in late 2023, or early 2024. That is the optimistic forecast and there was also testimony that the project may not go through at all.</p> <p>If FSMTC sought and received grant funding for a Kosrae cable there should be no limitation on it pursuing such a project since the OAE/World Bank cable has not been built and may never be built.</p> <p>This cable cannot be deemed a bottleneck facility when it does not even exist.</p> <p>On the issue of the Pohnpei Spur, there are in fact two distinct portions of one facility. The Pohnpei Spur should not be deemed a bottleneck facility as FSMTC still retains an interest in 50% of the spectrum rights and is challenging the validity of the current IRU which transferred 50% of the spectrum rights to OAE for no compensation. This matter is currently in court.</p> <p>Further, OAE is unreasonably trying to interfere with an upgrade of the portion of the Pohnpei Spur unquestionably retained by FSMTC. OAE is contending that it will upgrade the spectrum with grant funding, but per testimony a) the grant funding is not approved by the World Bank, b) the upgrade would require the consent of RMI/MINTA to go forward for World Bank to approve, c) it is unclear at the current time what conditions World Bank will impose on RMI/MINTA for the upgrade, d) no contracts have been signed by OAE to actually</p>

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			<p>undertake the upgrade, and e) no estimate can be given as to when it will occur, f) this upgrade was first proposed in 2018.</p> <p>Since this upgrade is so ill defined and uncertain, FSMTC should not be barred from performing this upgrade on its own because a) contracts have been signed, b) work has already begun, c) it will be completed by October, 2021 d) FSMTC needs the upgrade to service its growing demand in Pohnpei, e) it cannot wait for OAE to maybe take action. For these reasons the Pohnpei Spur should not be considered a bottleneck facility by virtue of the definition that two such facilities already exist.</p> <p>On the issue of terrestrial fiber, it should not be considered a bottleneck facility for the reasons addressed in the main portion of this response.</p>
		Boom!	<p>YES we agree.</p> <p>The Act, is setup so we can compete at a global level, and match the same standards every other rational nation and it's Telco providers follow. There is a reason why you don't build two highways on top of each other when and where there is only one needed, and it takes away the benefits of a much more collaborative use of funds, for the betterment of the state and nation.</p> <p>iBoom has proven it can build it's own fiber connection, despite facing numerous unfair activities to halt us, we still were able to build our own fiber connectivity, 100% on our own, at our own costs, while also going above and beyond our scope of responsibilities.</p> <p>While it can be done, duplicating a fiber access network that connects everyone makes no financial sense, and goes entirely against fair competition terms under the ACT, and only hurts the people and the end users.</p>
			[REDACTED for confidential reasons indicated by commenter]
		DTC&I	Yes
		OAE	<p>Yes, OAE agrees with the proposition that submarine and terrestrial fiber communication facilities are bottleneck facilities as defined in the Act. They cannot economically be replicated and achieve low prices. OAE believes that all homes, business- and Government offices should have access to fiber. In order to achieve that, OAE believes that the price needs to be low. Fiber networks have high fixed costs and very low incremental capacity</p>

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			<p>costs. To achieve low prices to consumers the fixed costs of building the network need to be shared by as many customers as possible. Duplicating networks means twice the fixed costs need to be shared amongst the same number of customers. It may also mean that Operations and Maintenance (O&M) costs for two independent networks are unnecessary higher than for one network as O&M efficiency gains are hard to achieve.</p> <p>The reason for OAE’s existence is to ensure that fiber assets are able to be shared by all providers to deliver the lowest cost possible. The fiber assets are grant-funded and do not incur capital costs that need to be paid back.</p> <p>In the absence of capital costs that are in the end to be borne by customers the O&M costs are the only remaining area for network efficiency gains.</p>
		CPUC	<p>Yes CPUC agrees with the proposition that submarine and terrestrial fiber communication facilities are bottleneck facilities as defined in the Act. They cannot economically be replicated and achieve low prices. CPUC would like to offer a compelling service as it believes that high prices and poor services are holding Chuuk back from being able to deliver on the economic potential and growth that the internet offers.</p> <p>Whilst CPUC have the technical skills and capability to build fiber networks, we cannot make the economic business case to do so to cover all of Weno for example. We could build a connection from the CLS to our head office and justify it just on the cost saving against our own FSMTC account but that just solves for CPUC. We need to be able to offer lower prices and better services to all of Weno (and through the rest of the lagoon). Duplicating the network is not financially possible.</p> <p>CPUC also wants to be able to ensure that Weno gets the same access to better services that the other main islands in each state will get with the OAE. If OAE won’t build fiber in Weno because it already exists then we need access to the fiber that has been built.</p> <p>Otherwise the competition objectives will not be delivered in Weno.</p>
B	In your view, are submarine and terrestrial fiber	FSMTC	The basic answer to this question is no, since the main competition to submarine and terrestrial fiber communications is satellite communications. TRA should be addressing a fair

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	communications facilities essential for the production of communications services in the FSM?		playing field for both types of players in the market, fiber and satellite, rather than trying to limit access to the submarine and terrestrial markets. If satellite supplants fiber cables, it is not essential.
		Boom!	Absolutely. And far beyond just communications.
		DTC&I	Yes
		OAE	<p>OAE's view is that both submarine and terrestrial fiber communications facilities are essential for the production of modern, reliable and high-speed communications services in FSM. Satellite, wireless and copper can all deliver a service, but not to the quality and price that fiber can deliver.</p> <p>Fiber is essential for low cost, high quality and high-speed connectivity essential for FSM's development.</p>
		CPUC	<p>Submarine and terrestrial fiber communications facilities are essential for the production of modern, reliable and high speed communications services in FSM. Satellite, wireless and copper can all deliver a service, but not to the quality and price that fiber can deliver.</p> <p>Fiber is essential for low cost, high quality and high speed connectivity essential for Chuuk's economic and social development.</p>
C	In your view, could either submarine or terrestrial fiber optic communications facilities practicably be duplicated by a potential competitor in a communications market in the FSM? Please explain the reasons why, in your view, a communications facility can or cannot practicably be	FSMTC	<p>Please see the response to a, above, to explain practical duplication and that the TRA should not prevent construction of facilities that are not existent now, and which are only hypothetical in the future.</p> <p>Concerning terrestrial fiber optic communications, the questions being asked do not address the actual issues presented here and will addressed below.</p>

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	duplicated by a potential competitor in a communications market in the FSM.		
		Boom!	<p>Physically, networks can be duplicated. We have already proven that.</p> <p>Economically though it goes against ability to achieve low prices for both residential and commercial users.</p> <p>Under our the terms of our Telco license, and the terms of the Act, we could have been up and running years earlier, and throwing our investments into much larger plans.</p>
		DTC&I	<p>Theoretically, yes, but no in a practically business minded sense taking into account small market like FSM with economy of scale taking account return of investment, high cost of services for the business products, etc. among concerns</p>
		OAE	<p>Physically, networks can be duplicated. There is no unique skill or resource that any participant in FSM has that is unique.</p> <p>Economically though it is not possible to achieve low prices and high take up if networks are duplicated. FSM is a developing nation with low GDP per person; it needs access to the lowest priced, highest quality bandwidth and this can only be done by using network assets efficiently.</p> <p>Duplicating investment means that prices have to be higher to cover the costs and higher prices means less take-up.</p> <p>This is well described in paras 29 and 30.</p>
		CPUC	<p>Physically, networks can be duplicated. There is no unique skill or resource that any participant in FSM has that is unique.</p> <p>CPUC can easily build any network and is keen to help OAE build it's network in Tonowas, Udot and Eot.</p>

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			<p>Economically though it is not possible to achieve low prices and high take up if networks are duplicated. Chuuk has a low income per person; it needs access to the lowest priced, highest quality bandwidth and this can only be done by using network assets efficiently.</p> <p>Duplicating investment means that prices have to be higher to cover the costs and higher prices means less takeup. Takeup is already low compared to other countries and should be much higher. Being forced to duplicate is not going to improve takeup.</p>
D	Referring to the description of fiber optic communications facilities in paragraphs 17-18 above, are in your view there any specific elements or portions of either submarine or terrestrial fiber optic communications facilities that could be practicably duplicated by a potential competitor?	FSMTC	The short answer is yes, but see responses a and c.
		Boom!	<p>It is not practical to duplicate submarine cables. And while it is a good goal long term to have a secondary redundant backup, there is no point even achieving that when the first submarine cable isn't being used fairly.</p> <p>Same goes for the terrestrial.</p>
		DTC&I	No
		OAE	<p>In the submarine cable field, OAE does not believe that it is practical to duplicate. OAE agrees with the statements in paras 27 and 28.</p> <p>In terrestrial, given the pricing that OAE as announced, it does not make any economic sense to duplicate the infrastructure. OAE will offer a fiber connection to a house for \$10 per month.</p>

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			<p>Again, OAE agrees with para 29, 30 and 31.</p> <p>The ONT and optical equipment may be able to be replicated depending on how the network is built. OAE’s network is designed as a layer 1 open access network where service providers bring their own ONT and OLT equipment. OAE provides a “dark” fiber network.</p> <p>FSMTC’s network in Weno is likely to require the OLTs and ONTs to be included as a bottleneck facility because of how the physical network has been built with cascading splits. Access is likely to be required at a layer 2 level or Bitstream level. Layer 1 access would also be required but it is likely that there is only limited fiber available because of the design.</p> <p>The preferred option for a network like Weno is that the network is upgraded with additional capacity to allow for layer 1 access which would allow competing service providers to provide their own ONTs and OLTs rather than having to rely on FSMTC to provide a bitstream service. The issue with a bitstream service is that it will be constrained by the investment and technology decisions made by FSMTC and will potentially limit product- and service innovation and competition.</p>
		CPUC	<p>It is not practical to duplicate submarine cables.</p> <p>In terrestrial, given the pricing that OAE as announced, it does not make any economic sense to duplicate the infrastructure. OAE will offer a fiber connection to a house for \$10 per month.</p> <p>CPUC can see how it can deliver a compelling proposition in Tonowas when OAE builds, but it is frustrated that it cannot see how it could do that in Weno, where all the customers currently are.</p> <p>CPUC can duplicate the electronics used by FSMTC in Weno. This is the ONT that goes in people’s homes and the electronics at the telephone exchange. It is concerned though that the way that FSMTC has built the network may mean that it is not possible to get. CPUC would argue that FSMTC has chosen to build the network in such a way as to make this layer one access difficult and potentially could be a breach of Section 343(2)(g) as noted in para 33.</p>

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			The next best alternative is a bistream service from FSMTC that would allow cost based access. This however is a poorer outcome as it limits service innovation to the assets that FSMTC has invested in.
E	Are there any geographic or product markets in the FSM in which submarine or terrestrial fiber networks could be practicably duplicated by a potential competitor?	FSMTC	The FSM is a small market where duplication is not desired or for the most part necessary. However, the issue as raised above is not hypothetical duplication, but what is actually being built on the ground. These questions do not address these issues, but please review the answers above.
		Boom!	No.
		DTC&I	Given today’s technology, and again small market like FSM the answer is No...
		OAE	No. While different, individual point to point links may be able to be built. Duplication of networks is not sustainable in the long run. It increases costs and will lead to higher end user service costs that are unnecessary if assets are shared.
		CPUC	No. While individual point to point links may be able to be built (CPUC has considered building a link from the CLS to its head office) duplication of networks is not sustainable in the long run. It increases costs which increase prices and therefore provides a worse outcome for end customers.
F	Additional Comments	Chuuk State	<p>These comments are general comments that are not specific to any numbered parts or sections of this proposed TRA draft. As the focal point for Chuuk State Government on this critically needed project, I would like to express my sincere gratitude to the TRA and all parties involved in this project. It is a big step for the FSM towards the future. Thank you!</p> <p>Finally, I would like to also point out that everything in this proposed draft is aligned with the spirit and principles of “Net Neutrality” which guarantees through law, open access to any pre-existing or future telecommunications companies who wish to enter the market in the</p>

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			FSM. Furthermore, I would like to also add that this project will enable the FSM as a country to progress forward towards the future.
		FSMTC	We have summarized brief responses to these questions, but we are also stating as a public comment that you are not asking the right questions.
			<p>Submarine Fiber Optic Communications</p> <p>As stated above, any submarine fiber optic communications facilities cannot be all lumped together as one indivisible operation.</p> <ol style="list-style-type: none"> 1. Each facility must be addressed separately. 2. There is currently a lawsuit and the TRA should not make any determinations concerning these facilities until the lawsuit is resolved. 3. FSMTC is seeking to set aside the FSMTC IRU, or at least effect significant modifications. 4. The Kosrae cable has not been built, it may never be built, and per the OAE the earliest it could be operational is late 2023, or early 2024. That would appear to be optimistic. 5. FSMTC could also receive grant funding and build the Kosrae cable earlier. 6. FSMTC owns outright the Pohnpei Spur. 7. FSMTC is challenging in Court the taking of 50% of the Pohnpei Spur spectrum by OAE. However, notwithstanding this challenge, FSMTC owns exclusively the other 50% of the spectrum and its access to the cable through its own cable landing station. 8. FSMTC is able to upgrade its own spectrum on its own cable without interference and it needs the additional bandwidth. 9. OAE has talked about a spectrum upgrade since 2018, but has accomplished nothing. 10. For these reasons the TRA should not declare these underwater facilities bottleneck facilities at this time.
			<p>Terrestrial Fiber Optic Communications</p> <p>Concerning Terrestrial Fiber Optic Communications the questions posed are misleading, ambiguous and do not address the specifics of reality in the FSM.</p>

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			<p>Again, this whole proposal appears to be submitted and pushed through by the World Bank to justify and support their agenda in the FSM. As a result, they do not wish to ask appropriate questions.</p> <p>There are several issues here and no information is being solicited on any of these issues.</p> <p>There is currently a financing agreement with the FSM and the World Bank to build Fiber to the Home (FTTH) in the FSM. The World Bank wants to fund FTTH in the FSM but make it operational only through ownership by the OAE. That is fairly nonsensical since OAE has no technicians, repair people, service people, equipment or tools.</p> <p>However, if terrestrial fiber is to be designated a bottleneck facility then OAE should not be involved at all since it would duplicate services for what FSMTC already has at the current time.</p> <p>302(f) 'bottleneck facility' means a communications facility declared by the Authority to be essential for the production of communications services which, for technical reasons or due to economies of scope and scale and the presence of sunk costs, cannot practicably be duplicated by a potential competitor in a communications market;</p> <p>Further the questions that need to be asked are as follows:</p> <p>1. What terrestrial fiber optic cable has already been installed in the FSM?</p> <p>FSMTC has installed terrestrial fiber optic cable as follows:</p> <ul style="list-style-type: none"> a. Yap, all businesses and commercial enterprises, government, and most current residential customers. b. Chuuk, all of Weno Island is covered, including businesses, government and residential customers. c. Pohnpei, most businesses, government and a large portion of residential customers. d. Kosrae, initially started laying fiber cable to customers. <p>2. What terrestrial fiber optic cable has been installed by OAE?</p> <ul style="list-style-type: none"> a. Yap None, no contracts in place, grant not approved by World Bank, no estimated start date proposed.

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			<p>b. Chuuk, None, no contracts in place, grant not approved by World Bank, no estimated start date proposed.</p> <p>c. Pohnpei, None, no contracts in place, grant not approved by World Bank, no estimated start date proposed, no financing agreement signed by the State which is a requirement for all four state to receive World Bank approval.</p> <p>d. Kosrae, None, no contracts in place, grant not approved by World Bank, no estimated start date proposed.</p> <p>3. Where is OAE supposed to build its FTTH?</p> <p>Unknown, no plans. They are not supposed to duplicate what is already in place but approximately 90% of what they intend to build would be duplicative.</p> <p>4. If FTTH is not supposed to duplicate what is already in place, with both hardware, and technical support, what is its purpose?</p> <p>Unknown, no answer can be provided, other than “its free money.”</p> <p>5. Is the purpose of this proposal to take assets from FSMTC and turn them over to OAE without compensation and without recourse.</p> <p>That would violate Article IV, section 3 of the Constitution, prohibiting deprivation of property without due process, and would be an unconstitutional taking.</p> <p>6. Is FSMTC supposed to then pay OAE for the use of its own lines?</p> <p>That would violate Article IV, section 3 of the Constitution, prohibiting deprivation of property without due process, and would be an unconstitutional taking.</p> <p>7. What is the FTTH business model proposed by OAE.</p> <p>A comprehensive business plan has not been submitted, but oral explanations would appear to be unworkable and not feasible, even if grant funded. For example I am attaching Exhibit 6 from the current civil action with OAE. It shows customers in FSM for ADSL. It shows 6678 customers in all four states. No one has argued that there are substantially more customers in untapped markets.</p>

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			<p>OAE further testified that they need 20% of a market to be committed to a retail provider to build up the FTTH in any area. (Area has not been well defined).</p> <p>There would be many areas where they could not reach that market level due to the fact FSMTC is already servicing more than 80% of the market in those areas.</p> <p>The only way for OAE to then build would be to poach customers from FSMTC, but then this poaching is needless duplication of expensive fiber optic cable facilities, since OAE would build its own fiber.</p> <p>Lastly, OAE, a licensee of TRA to build terrestrial cable, is for all intents and purposes a competitor of FSMTC, and its FTTH project is primarily OAE engaging in retail operations. This also is against the wording and intent of the law.</p> <p>8. If FSMTC retains its current terrestrial cable systems what is its responsibility to allow other retailers to use such pre-existing facilities.</p> <p>This issue has never been addressed by TRA, even though the law has been in place since 2014. TRA has to consider costs of maintaining all of the infrastructure and the costs to provide services and run the system to any new retailers. Retailers have to pay a fair share of the costs. Retailers cannot simply plug in switching gear and provide a few modems and call themselves a telecommunications company. Retailers cannot simply rely on the FSMTC to continue maintenance, repair and service for free. Retailers also need to be assessed a portion of any costs to be charged by OAE for underwater cable communications. Lastly new retailers cannot simply service a small lucrative area, and leave the harder to reach and less lucrative areas to FSMTC. FSMTC has an obligation to service all areas of the FSM, but it cannot do so if it loses its paying customer base.</p> <p>Foreign telecommunications companies have run the numbers with spread out population, low numbers of customers and difficulties with the location, and not a single one has even conducted a preliminary exploration with investment here. Several non telecommunications local enterprises may be expressing interest, but they have not been assessed any costs yet, nor have they been apprised of any true and fair costs of operation. Once they are provided with real costs the business model as proposed by OAE will simply fail.</p> <p>9. How will terrestrial fiber compete against satellite?</p>

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			<p>This issue is simply being ignored. Star Link will be a major game changer with cut rate internet and satellite. Remote locations will be easier served by satellite as opposed to terrestrial cable. Once again, TRA as a regulator should be working with its local telecommunications providers to simply keep them operating, rather than focusing on grandiose plans that will not reach fruition.</p> <p>10. Should terrestrial fiber be considered a bottleneck facility?</p> <p>Not at this time, TRA has not conducted enough research or reviewed the issues. Its simplistic diagram on page 4 of the Paper is simply unhelpful, and does not address the factual matters that need to be reviewed.</p>
		OAE	<p>Re paragraph 34:</p> <p>OAE considers this a real issue where existing fiber networks have been built. Weno has an extensive fiber network and OAE needs access to fiber to connect to FSMTC radio towers (which are considered bottleneck facilities) to provide connectivity to service providers to allow them to provide fiber services on the islands of Tonowas, Udot and Eot.</p> <p>OAE would otherwise have to overbuild the fiber that FSMTC has built to Xavier and Tanachau. This would be a sub optimal use of funds.</p> <p>More importantly, OAE notes that without the ability of competing service providers to get access to the fiber that has already been built, the people and businesses of Weno will not have any choice in terms of who they get as a service provider. This will end up with Weno having higher prices and poor services.</p>