

Counter comments to the comments submitted by few stakeholders for your review and consideration:

Spectrum auction vs. administrative assignment of spectrum

A few stakeholders have quoted the 2G Supreme Court verdict, citing that spectrum is a national resource and therefore auction is the only method that ensures fair play in its allocation and assignment.

However, a preliminary analysis broadly categorizes spectrum assignments into three areas or categories:

- **Area of competitive bidding**, so that the Government would be able to earn revenue from such bidding.
- **Areas where the question of bidding does not arise** viz. sovereign functions
- **Areas of non-feasibility of competitive bidding.**

1. **Area of competitive bidding** – the underlying principle here is that there are competitors who are prepared to bid for limited spectrum which is available, so that it fosters competitive bidding.

This shall apply therefore to cases which can broadly be described as ‘*spectrum used for commercial non-captive*’ purposes.

2. **Areas where spectrum is used for sovereign functions**, for non-commercial purposes viz. Defence, Public Safety etc., whether captive or non-captive, *it does not merit any auction simply because it is in national interest and counter intuitive to engage in a bidding process* (nothing can be above national interest, which cannot be measured in monetary terms).
3. Notwithstanding the above, **there are cases where, despite being a captive or non-captive commercial usage, it is not feasible to provide for competitive bidding for one or more of the following reasons:**
 - a. *The usage is confirmed to a special category of users* and not the general public.
 - b. *Such special categories of users (niche industry) are concentrated in just a few geographical pockets* as opposed to being widely present in every geography.
 - c. *The total size of the captive or non-captive commercial usage industry is insignificant* and a mere fraction of the size of the Telecom Access, Services market.
 - d. International precedents and prevailing practices of Spectrum assignment also evidence administrative assignment of Spectrum for reasons similar to above.

Mobile Trunked Radio Operator Association of India

Delhi Office: Unit No. 529, DLF Prime Towers, Okhla Industrial Area, Phase-I, New Delhi-110020, India
TEL: +91-11-61258800, E-mail: mtroadelhi@gmail.com

In the specific context of PMRTS, where the Industry is confined to only 8 MHz of Spectrum in the 800 MHz band, the total size of the industry today is less than Rs.100 crores and even if in the foreseeable future it grows several times its present size, it does not lend itself to a viable auction methodology.

The argument that:

- a) ***Auction is the only non-discriminatory method*** for ‘scarce national resources’ like Spectrum ***is riddled with flaws and contrary practices in day to day life.***

Let us consider town planning as an example. Just like urban land uses are categorised into Residential, Industrial, Commercial & Administrative, Infrastructure, Hospitals, School, Open Spaces etc. and have a different reservation rule (also price tag) for each land use case, ***the argument that an auction price for Commercial Real Estate*** (highest possible price that can be fetched perhaps) ***should apply uniformly for all land use case, is naturally a flawed one.***

- b) ***Auction guarantees a balanced competitive landscape amongst communication Service Providers*** and upholds the same service, same rules for a common resource i.e. Spectrum, is not applicable to the PMRTS Industry, since PMRTS is not comparable with any access service. Please see table below to know how different and niche the PMRTS Industry is as compared to an access service like Cellular Telephony.
- c) ***The auction determined price of Spectrum in the 800 MHz band*** being a relevant parameter ***is perhaps the most fallacious reasoning ever, given the differences in PMRTS and other access services,*** as illustrated below.

Let us for a moment compare the PMRTS Operation with a Cellular Service, since comments have been received from 2 leading Cellular Service Providers.

	Cellular	PMRTS
1	Any citizen is a prospective customer	Only institutions/ businesses in 20 specific industries are prospective customers. More than half of these are Public Sector institutions/ Govt. Departments
2	Subscriber base > 1,148 million	Subscriber base of just 65,000
3	Pan India network coverage and spread.	Network coverage within 30 kms in just 25 specific cities/towns
4	Annual revenues exceeding Rs.2,00,000 Crores.	Annual revenue of < Rs.100 Crores.

5	Total Spectrum auctioned by Govt. of India for Cellular Service 51,236 MHz valued at Rs.1,50,173 Crores	Total Spectrum reserved for PMRTS Industry is just 8 MHz(from which allocations have been made)																
6	Spectrum re-use every 500 meters- 1 km in a dense urban environment.	Spectrum re-use every 120 kms																
7	Cell radius of 200m in dense urban environment	Cell radius of 30 kms in dense urban environment																
8	One to one, two way/duplex communication, voice ,data, video & messaging, with full inter-connectivity, across all Telecom Circles, with PSTN ,Other operators, NLD,ILD and elaborate numbering plan and national and international roaming	One to many, push-to-talk, semi-duplex closed user group communication with one way, severely restricted PSTN access (1 E1/30 channels for Digital) , no video streaming and no numbering plan. No inter-service area or inter-LSA interconnectivity																
9	Auction fee paid one time per Subscriber for 20 years Rs.1,308	Administrative assignment based spectrum fee of Rs 9,600 per unit of spectrum(per voice path) for 90 users plus Rs 100 per subscriber per annum																
10	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Auction fee p.a.</td> <td style="text-align: right;">Rs.65.4</td> </tr> <tr> <td>SUC p.a.</td> <td style="text-align: right;">Rs.67.7</td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; padding-top: 5px;">Spectrum fee per subscriber p.a.</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">Rs.133.1</td> </tr> </table>	Auction fee p.a.	Rs.65.4	SUC p.a.	Rs.67.7	Spectrum fee per subscriber p.a.			Rs.133.1	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Spectrum fee p.a.</td> <td style="text-align: right;">: Rs.107</td> </tr> <tr> <td>Additional fee/Subscriber p.a.</td> <td style="text-align: right;">: Rs.100</td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; padding-top: 5px;">Spectrum fee per Subscriber p.a.</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">Rs.207</td> </tr> </table>	Spectrum fee p.a.	: Rs.107	Additional fee/Subscriber p.a.	: Rs.100	Spectrum fee per Subscriber p.a.			Rs.207
Auction fee p.a.	Rs.65.4																	
SUC p.a.	Rs.67.7																	
Spectrum fee per subscriber p.a.																		
	Rs.133.1																	
Spectrum fee p.a.	: Rs.107																	
Additional fee/Subscriber p.a.	: Rs.100																	
Spectrum fee per Subscriber p.a.																		
	Rs.207																	

Given the severely limited size, scale, scope of service, geographical spread, spectrum reuse, target customer, use case and growth potential, ***the PMRTS Industry even today is making a payment much higher than a Cellular Service Operator on a per subscriber basis – whether it's License Fee (8% of AGR) or Spectrum/ Royalty Fee.***

Notwithstanding the above, ***the PMRTS Industry has been rendered a huge disservice by starving it of spectrum for an incredibly long period of 9 years***, despite TRAI recommendations to the contrary made in July 2018 ! Whether administrative assignment or otherwise, it is our belief that the PMRTS Industry should be allocated spectrum without any further delay, even if it involves auction subject to not threatening the viability of the industry, since the industry caters to vital sectors of the economy such as :

- Municipal Corporations, Public Utilities, for fire, disaster management during man made or natural events.
- Critical Infrastructure services such as highways, ports, airports, construction, oil refineries, oil and natural gas , mines and industrial townships

Mobile Trunked Radio Operator Association of India

Delhi Office: Unit No. 529, DLF Prime Towers, Okhla Industrial Area, Phase-I, New Delhi-110020, India
TEL: +91-11-61258800, E-mail: mtroadelhi@gmail.com

- Health care, hospitality & tourism, security, schools, Resident Welfare Associations, Banks, courier industry and other private Enterprises.

We need to destroy the myth that Captive usage is non -commercial:

The fact that DoT has been allocating spectrum on an administrative assignment basis as an interim measure for captive usage /CMRTS since 2014 *while denying the same to PMRTS, is perhaps based on the myth that Captive usage /CMRTS is actually non -commercial usage*, simply because no revenue being generated through such use since the User is deploying this for their own purpose only.

If we exclude Spectrum usage for Sovereign functions (Defence, Public Safety, Disaster Management), all Captive usage /CMRTS use cases are just as ‘Commercial ‘ as PMRTS. Some examples to illustrate the above are :

1. **Refineries /Oil & Gas Companies:** Whether Public Sector or Private Sector, *all firms in this Sector have making profits as their prime motive.* Most of them are also listed on the National Stock Exchanges, and their extent of profits drives their enterprise value.
2. **Airports /Airlines/Railways/Metros/Ports/Highways/Industrial Complexes:** *All the Companies engaged in the above critical infrastructure sectors are also driven by the profit motive* and all customers of such infrastructure companies are paying for the use of Services provided. Airport Authority of India, which have deployed Tetra systems on a CMRTS basis at several leading airports in India (viz. Delhi, Bengaluru, Mumbai, Hyderabad etc.) charges all airlines subscription fee for using the communication system. How is this use case any less commercial as compared to PMRTS?
3. **Municipal Corporations & Public Utilities:** Municipal Corporations and Public Utilities are using Captive/CMRTS Radio Communication System for day-to-day activities of the Municipal Corporation like Solid Waste Management, fire-fighting etc. *for which citizens are paying charges/tariffs/taxes for consuming such Services provided by the above agencies*, like property and other taxes, which like any commercial establishment, keep changing based on cost escalations.
4. **Utilities /Private Enterprises/Courier Agencies /Security Companies/Construction Companies/Hospitals /Banks/Hotels etc:** *Whether captive usage or not all companies engaged in the above industries, like the 3 sectors alone have profit making as their core objective. At the heart of the use case is enhanced productivity and profits.*

In conclusion we would like to state that:

- a) Companies /Departments /Agencies in all the Sectors mentioned above *have one of the two options available for using Wireless Communication :*
 - i. Set up their own captive usage network /CMRTS or

- ii. Subscribe to a PMTS Operator

Irrespective of which option above is chosen, the end use of the Wireless Communication (purpose) and the technology are same, if a large coverage footprint is required by these agencies.

It is clear that whether one uses Captive or CMRTS or PMRTS, the purpose is to make operations more productive and profitable, which is an out and out profit motive.

- b) It is established beyond any doubt that PMRTS offers the following advantages over Captive usage /CMRTS.

- i. ***PMRTS loading efficiency (no. of users/unit of Spectrum) is far superior*** and in fact several times that of Captive usage /CMRTS. The logic is simple because PMRTS, by virtue of providing a city wide service, is able to offer unmatched trunking efficiency of channels deployed when compared with small captive systems scattered all over a city (analogous to a direct telephone line as opposed to having an Electronic Private Branch Exchange –EPABX)

Therefore PMRTS ensures the most efficient use of Spectrum, best for a scarce national resource.

- ii. ***PMRTS Operators pay 8% of AGR as license fee*** to the Dept. of Telecommunications as against no payment made by Captive /CMRTS because they use it for their own captive use.

- iii. ***PMRTS offers a wide area, city-wide coverage.***

DoT has in fact meted out grave injustice to PMRTS Operators *by choosing to exclude it for interim allocation of Spectrum for administrative assignment since 2014 and has distorted the level playing field w.r.t. Captive usage /CMRTS.*

We urge TRAI to take cognizance of the above and ensure a level playing field for PMRTS w.r.t. Captive usage /CMRTS by maintaining a high tariff differential in favour of PMRTS.

Using 4G/5G Network slicing for PMRTS:

Evolution of technology is an ongoing process and deployment considerations for any new technology go hand in hand with :

- i. Availability of equipment – both infrastructure and end user devices.
- ii. Population of legacy end user devices and whether they lend themselves to upgradation or inter-operability with the new technology.
- iii. Cost of Service and end user terminals using the new technology and whether end customers find it viable.

- iv. Potential business /investment loss to licensees for giving up legacy technology and viability of new investments for the Licensee and end customers.
- v. Priority of the 4G/5G Spectrum owners to offer an adequate slice of their network to PMRTS licensees on a basis which PMRTS operators find viable, required geographical coverage and priority of the 4G/5G Network slice provider matching with the needs of PMRTS Licensees.

We are of the view that Licensing or regulatory norms should provide an enabling framework for a future adoption, without making it mandatory.

Comments by stakeholders on Q3. Regarding, Whether PMRTS providers should be permitted Internet connectivity with static IP addresses?

We strongly support Site to Site connectivity requirement within the same LSA, However PSTN connectivity is not required

Comments by stakeholders on Q8. Regarding whether there is a need to review the requirement of obtaining Wireless Operating License (WOL) by PMRTS providers?

We strongly recommend that obtaining Wireless Operating License (WOL) renewal by PMRTS providers should be deleted, in the same way, as done by DoT in case of Access Service authorization in November 2016.

Comments by stakeholders on Q20. Regarding whether there is a need to review the terms and conditions of CMRTS License?

We strongly recommend that CMRTS should not to be brought under UL regime. License and Spectrum Fee for CMRTS should be disproportionately higher than PMRTS.

In the interest of preserving limited availability of spectrum we recommend that captive CMRTS licenses may only be issued where PMRTS services are not available.