
Information Memorandum
(IM) for Next Generation
Mobile Services Award
(NGMSA).

Changes made in IM-
Explained

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1. Introduction

Pakistan Telecommunication Authority (PTA) has released the revised version of the Information Memorandum (IM) for 3G and 4G auctions. The first IM was released on 25th Feb 2014 while the revised IM was released on 17th March 2014. These revisions were made as part of the consultative process that is very appreciated by the industry analysts to accommodate some of the genuine demands of the prospective bidders.

A lot of discussions have been made on the changes in the revised Information Memorandum. For the benefit of our readers, we have tried to put some of the major changes in this document. We urge that readers should read the revised IM if they have any commercial interest as these are some of the changes we have discussed and evaluated and may not be the entire or exhaustive list of changes made so far since the IM was released earlier.

The revised IM essentially addressed the demand of the cellular mobile companies that were related to date extension, payment in Pakistan Rupees, easing up of roll-out obligations, and other issues. Currently, there are 2X30 MHz of spectrum in 2100 MHz and 2X20 MHz of Spectrum in 1800 MHz to be auctioned through two-stage bidding process.

Also, for any new entrant who will bid for the 2100 MHz can also get a lot of 7.38 MHz. Spectrum from 850 MHz band has been made available that will be auctioned in case of any new entrant enters the market otherwise it will be given out at a base price of USD 291 million.

Against popular expectation no changes or downward revision has been made by the government in the base price of the licenses. PTA did not change base price that was fixed at \$295 million per block of 2x10 MHz for 2100 MHz band, \$210 million per block of 2x10 MHz for 1800 MHz band and \$291 million for 850 MHz band. Only, winners of 2100 MHz band would be eligible to purchase 1800 MHz frequency band that essentially encourages operators to deploy LTE.

The changes made were basically on the request of the mobile operators that is part of the consultation process that PTA initiated and is appreciated by Industry Analysts.

Major changes made were on auction date extension, payment in Pak Rs against USD, easing up of roll-out obligations, QoS, mandatory sharing & roaming obligations, Bank Guarantees and other such issues

Against popular expectation no downward revision was made by the GoP in the base price of the licenses. PTA has fixed a base price of USD 295 Mn for 2x10 MHz in 2100 MHz band, USD 210 Mn for 2x10 MHz in 1800 MHz band and \$291 million for 7.38 MHz in 850 MHz band.

The final auction will be held on 23rd April 2014 and applicants are required to submit the sealed bid along with the pre-bid deposits till 14th April 2014. The Spectrum lots to be auctioned will be decided based on the responses received in the sealed bid stage. This will set the stage for final auction. We have released a white paper on the subject of likely scenarios that may emerge and the spectrum position and prices to be paid under the scenarios by the operators. This is also available for download from our web site www.phoneworld.com.pk for free.

DO NOT COPY

2. Unsold & Next Spectrum Auction

The most significant change was made on the issue of future spectrum auction. Revision is made regarding Unsold Spectrum and Section 1.4.3 of revised IM spells out the moratorium on the award auction.

In the revised IM it has been notified that if the entire available designated spectrum is sold then there will be no mobile spectrum auction carried out for 18 months in Pakistan, from the starting date of the NGSMA. After 18 months period of the auction there will be no restriction on Government of Pakistan and PTA, and they will be free to hold any action of any spectrum/ license.

No mobile spectrum auction will carried out for 18 months in Pakistan, from the starting date of the NGSMA except for any unsold spectrum.

According to analyst this could even go against the existing operators specially the weaker operators who fail to get any spectrum. The basic idea was to block any new license being issued and provide some leverage for those who win to roll-out networks to take advantage of first mover advantage.

3. National Roaming for New Entrant

A new roaming agreement clause has been added that does not have the kind of binding obligations as it was earlier on the existing operators to have roaming agreements. This clause was basically to facilitate the new entrants who are being encouraged to participate in the auctioning process.

According to Section 1.6.3 of revised IM, “the new entrant and the already present operators must enter into a roaming agreement. If the new entrant in the cellular mobile market and the already present operators cannot reach to a conclusion on the roaming agreement then after negotiation in good faith between them, the matter shall be resolved through arbitration”.

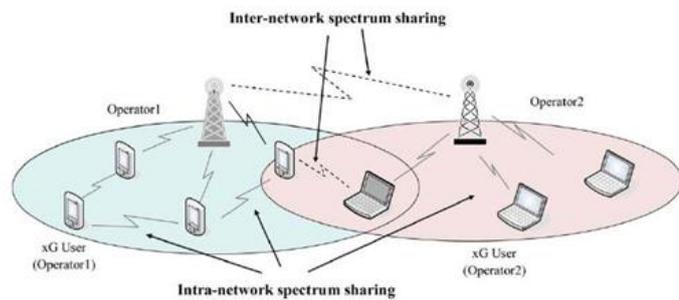
Previously, the PTA had authority unilaterally to decide and essentially enforce a commercial agreement specially determine the price of the roaming agreement.

The new National Roaming clause does not have the kind of binding obligations as it was earlier on the existing operators to have roaming agreements rather it is left to the market forces.

4. Sharing/Trading of Spectrum

A very important clause has been added to the new IM that enables current and new operators to do Spectrum sharing and trading.

This shall allow operators to consolidate their spectrums and networks for smooth rationalisation, usage rollout of new services and technology. It is also important because the licenses and spectrum are being given out for 15 years and in technology industry operating environment changes rather quite often. While, the policy and guidelines for such sharing/trading are not provided in the IM but it shows more clarity on the subject. It is important because currently Telecom Policy is under revision at the MoITT.



Spectrum Trading shall allow operators to consolidate their spectrums and networks for smooth rationalisation, usage rollout of new services and technology specially in the mid to long term. This is specially useful for the industry as all mobile licenses are long term typically 15 years.

Section 1.6.5 from the revised IM states that, the parties that occupied licenses can enter into a commercial arrangement with each other for active sharing and spectrum trading. However, any agreement made by the licensees will not take effect until Government of Pakistan policy in this regard is in place. It is also subject to the formal approval and comprehensive framework of PTA.

PTA will prepare comprehensive framework in this regard once the Government of Pakistan new telecom policy is in place.

5. Frequency Lots

All the telecom companies have publically showed their interest in obtaining the Spectrum in the forthcoming NGMSA. To facilitate maximum distribution of the spectrum for telecom companies so that they can take advantage of the latest technology an addition has been made in clause 2.2.2 whereby spectrum cap has been done for 2100 MHz, 1800 MHz and 850 MHz at 15 MHz, 10 MHz and 7.38 MHz respectively.

In addition to Spectrum Cap, there is a possibility for allocation of even 5 MHz that could accommodate more operators thereby maximizing participation.

However, more importantly the addition of the following clause makes the auction more interesting for the operators specially those which are not deep pocketed “the spectrum floor for the 2100 MHz may be reduced to 2x5 MHz for the auction stage depending upon the lot definition following receipt of Sealed-bid Offers”. In short while, the initial interest to be shown should be for 10 MHz but if the response is encouraging there is a possibility that the PTA may offer even 5 MHz to accommodate maximum operators. The following are the spectrum floor & caps clarifications for previous and the revised IM:

5.1 Previous IM:

Spectrum Band	Spectrum quantity	Spectrum Floor
2100 MHz	2x30 MHz	2x10 MHz
1800 MHz	2x30 MHz	2x10 MHz
850 MHz	2x7.38 MHz	2x7.38 MHz

5.2 Revised IM:

Spectrum Band	Spectrum quantity	Spectrum Floor	Spectrum Cap
2100 MHz	2x30 MHz	2x10 MHz	2x15 MHz
1800 MHz	2x20 MHz	2x10 MHz	2x10 MHz
850 MHz	2x7.38 MHz	2x7.38 MHz	2x7.38 MHz

6. Roll-out Obligations

Three and five month extension has been given to both existing and new entrants respectively for the 1st phase of roll out. They have also been asked to increase their sphere of roll outs. The changings have been made in the Section 2.3 of the revised IM.

The extension in meeting roll-out obligations were seen as too ambitious because of the large investment required, issues with right of way (specially in cities where the industry already is facing issues with civic authorities who at times are unreasonable in their demands for putting up mobile infrastructure) and the fact that higher spectrum will may entail coverage issues.

The downside is that consumer may have to wait a little bit longer for the service.

However, as was the case with 2G the competitive environment forced the operators to roll out more aggressively than they were mandated by the regulators. This probably may even be the case for 3G roll outs. The revision in IM seems to be added mainly for safety reasons to avoid any regulatory default.

Following are the roll out plans from both IM's.

Rollout obligations have been eased out to mitigate the negative effect if any of large upfront investment, complex ROW and coverage issue due to higher frequencies.

On the other hand the expected competitive environment forcing operator's faster roll out may not really provide the expected relief to operators.

6.1 Minimum rollout obligations associated with 2100 MHz spectrum

6.1.1 Previous IM:

Phase	Time from the Effective Date		Coverage requirements
	Existing Cellular Mobile Operator	Market Entrant	
First phase	6 months	1 Year	Coverage of the cities of Islamabad, Karachi, Lahore, Peshawar and Quetta and Ten (10) further cities, one of which must be located in each of the four provinces.
Second phase	1 year and 6 months	2 year	Provide coverage of 80% of District headquarters
Third phase	4 year	5 year	Provide coverage of 90% of Tehsil headquarters

6.1.2 Revised IM:

Phase	Time from the Effective Date		Coverage requirements
	Existing Cellular Mobile Operator	Market Entrant	
First phase	9 months	15 months	Minimum 5 cities including four Provincial and Federal Capital Coverage from at least 20% of existing sites or coverage of 20% of the City Coverage Area (Whichever is greater) to provide NGMS
Second phase	18 months (1 year and 6 months)	30 months	Coverage of 10 further cities, minimum two in each province with coverage from at least 20% of existing sites or coverage of 20% of 2G Coverage Area (Whichever is greater) to provide NGMS.
Third phase	48 months (4 year)	5 year	Provide coverage of 70% of District headquarters (minimum 4 District Headquarters in each province)
Fourth phase	72 months (6 year)	7 year	Provide coverage of 50% of all Tehsil headquarters (minimum 20 Tehsil Headquarters in each province)

6.2 Minimum rollout obligations associated with 1800 MHz spectrum

6.2.1 Pervious IM:

Phase	Time from the Effective Date		Coverage requirements
	Existing Cellular Mobile Operator	Market Entrant	
First phase	1 year	1.5 years	Coverage of the cities of Islamabad, Karachi, Lahore, Peshawar and Quetta and Ten (10) further cities, one of which must be located in each of the four provinces.
Second phase	2 years and 6 months	3 years and 6 months	Provide coverage of 80% of District headquarters
Third phase	5 years	6 years	coverage of 90% of Tehsil headquarters
All timelines are from the effective date of license			

6.2.2 Revised IM:

Phase	Time from the Effective Date		4G/ LTE Coverage requirements
	Existing Cellular Mobile Operator	New Market Entrant	
First phase	12 months(1 year)	1 year and six months	NGMS presence in a minimum of 5 cities including 4 provincial capitals and the Federal Capital
Second phase	36 months (3 years)	3 years and 6 months	Minimum Coverage of 10 further cities, one which must be located in each of the four provinces, with coverage of 25% of 3G Coverage Area.
Third phase	60 months (5 years)	6 years	Provide coverage of 50% of District headquarters.
Fourth phase	84 months (7 years)	8 years	Provide coverage of 25% of all Tehsil headquarters.
*all timelines are from the effective date of the license			
Theses roll out obligations are to be met by deploying LTE in 1800 MHz band			

6.3 Minimum rollout obligations associated with 850 MHz spectrum

6.3.1 Pervious IM:

Phase	Time from the Effective Date	Coverage requirement
	For a Market Entrant Operator	
First phase	1 year	Coverage of the cities of Islamabad .Karachi, Lahore, Peshawar and Quetta and Ten (10) further cities, one of which must be located in each of the four provinces.
Second phase	2 years	Provide coverage of 80% of District headquarters
Third phase	3 years and 6 months	Provide coverage of 90% of Tehsil headquarters

6.3.2 Revised IM:

Phase	Time from the Effective Date	Coverage requirement
	For a Market Entrant Operator	
First phase	1 year	Minimum Coverage of the 5 cities. (Provincial and Federal Capitals).
Second phase	2 years	Coverage of 10 further cities .minimum two in each province
Third phase	3 years and 6 months	Provide coverage of 75% of District headquarters
Fourth phase	5 years	Provide coverage of 50% of tehsil headquarters

7. Quality of Service requirements / KPIs

Table 6 containing the QoS parameters and the requirements that have been revised and changes have been made to it. The QoS KPI's has been relaxed on most issues and the most significant is the download speeds. These QoS KPI relaxations may look very significant but PTA has almost never conducted an audit to check periodically these parameters mainly because of lack of both will and resources. The last QoS check was done in 2008 and that too was not very professional. PTA may need to strengthen its own organisation, outsource the assignment to 3rd party or work with the industry on making this more effective. It remains a fact that it will be the industry forces that would be the driving force to make operators comply with these KPIs or higher KPI standards. According to the revised IM:

- Network Down time is as of before less than 1% but it should be excluding the forced shutdown time.
- The Network accessibility parameter has been removed which was previously 99%.
- Service accessibility requirement has been changed from greater than 98% to 97% which should be up to three years from the date of commencement and greater than 98% thereafter.
- Call connection time has been increased from less than or equal to 5 seconds to less than or equal to 6.5 seconds.
- End to end SMS delivery time has been increased from 8 seconds to 12 seconds
- RAB setup success rate in Broadband data service performance has been changed from greater than 98% to greater than 97% which should be for three years from the date of commencement and to 98% thereafter.

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- The Inter System Handover (ISHO) parameter has been renamed to Inter System Handover (ISHO) for CS Voice (only). The requirements for this parameter has also been changed from greater than 97% to greater than or equal to 94% for three years from the date of commencement and 98% thereafter.
- For 2100 MHz spectrum the minimum broadband data requirements has been lowered from 512 kbps to 256 kbps. An additional parameter of Signal Strength has been added which states that the minimum outdoor signal strength of -100 dBm must be achievable with 90% confidence within the defined coverage area.
- For 1800 MHz spectrum an additional parameter of Signal Strength has been added which states that the minimum outdoor signal strength of -100 dBm must be achievable with 90% confidence within the defined LTE coverage area.
- For 850 MHz spectrum the minimum broadband data requirements has been lowered from 1 Mbps to 256 kbps.

8. Terms & Conditions Elaborated

Terms and Conditions have been elaborated in much more details in Section 2.5 which includes Emergency Services Tariffs, Interconnections, Manufacturing and General Conditions. According to Section 2.5, the privacy of communication of



Terms & Conditions

users and national security clauses has also been added to the revised IM. Through these details terms and conditions regarding consumer's rights are strengthened and reinforced. It is important to note that PTA has from time to time enacted

laws, rules and regulation that are equally applicable on the operators which has precedence over the anything that is conflicting with the IM.

8.1 Emergency Services

The Licenses have been asked to provide their customers with the access to government emergency services, which include automatic connections to local police, fire and ambulance assistance by means of a simple telephone number. And in case of failure of Licensee's automated system an operator should be at standby for emergency assistance.

Terms and Condition have been elaborated that relates to Emergency Services, Tariffs, Interconnects and other conditions.

However, it is important to note that PTA has from time to time enacted laws, rules and regulation that are equally applicable on the operators which has precedence over the anything that is conflicting with the IM.

8.2 Tariffs

The Licensee cannot reduce the tariff below the ground price that has been determined by PTA. It has been stated that if the Licensee's price for any services is unfair to any individual customer than the Authority may regulate Licensee's tariff, terms and conditions for those Licensed Services. A change has been done in the Tariff section in the addendum published on the 1st April 2014. It states that the Licensee should obey Authority's orders, determinations and regulations relating to the Licensee's tariffs issued from time to time by the Authority in accordance with the law, to protect the consumers' interest.

8.3 Privacy of Communication

The terms and conditions also elaborate Privacy of Communications which states that the Licensee should not monitor or disclose the contents of communication which is conveyed over its licensed system. An exception is made if the licensee wishes to maintain, repair or monitor the quality of service or as required by PTA Act 1996, the Rules, Regulations and conditions of its License.

8.4 National Security

National Security is a very important and a highly sensitive matter which has been elaborated in detail. In Section 2.5.7 few additions have been done in the addendum published on 1st April 2014.

- Section 2.5.7.2 has been amended and the sensitive areas have been replaced by unauthorized areas. According to this section, only authority has the right to restrict the Licensee from operating in any unauthorized area that has been defined by the Federal Government from the national security point of view.
- Addition to Section 2.5.7.3 has been done in terms of user information and Call Data Records (CDRs). It has been stated that “the Licensee shall not transfer user information and CDRs (except pertaining to foreign subscribers on operator's network while roaming) to any person/place outside Pakistan including AJ&K and Gilgit Baltistan”.
- Section 2.5.7.5 clarifies that “no remote access shall be provided to any unauthorized person/place for any maintenance, repairs, databases and facility”. The addition of “unauthorized” has been done in this clause whereas previously the word “unauthorized” was not used.
- The Section 2.5.7.7 has been discussed in more detail. According to the addendum ciphering/encryption other than the built in standard technologies i.e. GSM, WCDMA and LTE will not be used without approval of the authority. Previously, this clause just restricted the use of ciphering equipment's and software's.
- The best efforts have been demanded by the authority in the clause 2.5.7.13 which requires licensee to block the websites/web content and other services when directed by the authority.

9. Fee Structure & Bank Guarantees

According to the revised version Section 2.6, the initial spectrum fee would be paid in US Dollars or its equivalent in Pakistani Rupees which is to be converted at the National Bank of Pakistan. Earlier telecom companies were asked to submit the money for the auctioning in USD only. This is something that would allow the local banking industry to benefit as well as



the operators because of the unstable USD and Pak Rupee parity. The new Fee Structures also outlines the scenario in case of default on the instalments and early payments.

Penalty for non-payments of license fee has been added by the Government in the latest revised version of the IM. The Section 2.6 explains that in the case of delay in the payment to the allocation authority, the concern party shall pay late payment and additional fee of 2% per month or part thereof from the due date till the date of payment. In addition to this the License will be suspended / terminated on account of non-payment of any instalment of the initial fee, the outstanding amount shall be recovered as arrears of land revenue in addition to any other penalties to which the licensee may be liable.

According to the revised IM, in case of an overdue instalment, the Authority may serve upon the Licensee a show cause notice stating the default and seeking explanation within a specified time period which will be not less than seven days. The Authority after considering the Licensee's explanation may suspend or revoke the License as deemed appropriate.

In addition to payment through equivalent Pak Rs payment the Bank Guarantee (BG) for ISF and regulatory fee has been taken out.

While the main payment of ISF has been secured by elaborating further the payment clause, the BG for the regulatory fee was a redundant instrument that unnecessary increases the cost of doing business in Pakistan. This specially is true as the cost of raising a BG in Pakistan is a costly affair.

The Bank Guarantees required by the PTA in section 5.4 for Initial Spectrum Fee (in case of opting for 5 instalments of the 50% payment) and the annual regulatory fee has been taken out. While the main payment of ISF has been



secured by elaborating further the payment clause, the bank guarantee for the regulatory fee was a redundant instrument that unnecessary increases the cost of doing business in Pakistan. This specially is true as the cost of raising a Bank Guarantee in Pakistan is a costly affair.

As per section 5.4 of the IM published on 25th Feb stated that for the initial fee, if the winner does not opt for 100% upfront payment the Licensee should deliver the authority an unconditional, irrevocable and continuing Bank guarantee on a format that is acceptable to the authority. If the payment of any instalment in initial spectrum fee cannot be made by the licensee then the authority has the right to encash the Bank guaranty at any time. For the annual regulatory dues, the same conditions were made where the authority asked for an unconditional, irrevocable and continuing bank guarantee that was acceptable to the authority. These clauses have been withdrawn from the revised IM that has been published on 17th March 2014.

10 Conclusion

The spectrum auction process has been delayed for a very long time due to the controversies raised over the auction process initiated by the last government. The current political and regulatory regime needs to be appreciated for its openness to the concerns of all stakeholders where most of them have been amicably addressed. The role of the operators to engage proactively is commendable. This is mainly not the case in most countries around the world.

The most important element is the structured manner in which the managers of the current process steered the changes in the IM and the transparency around the same. The above are just a few important amendments that we observed and there certainly will be more that we have not been able to capture or may have not interpreted right. The important point is that for readers who have commercial interest should visit PTA web site (www.pta.gov.pk) specially created for the awareness and information providing updates on the process and other things surrounding the NGMSA.

The modifications made in the revised IM will ensure greater benefits and aid in formulation of a well-balanced auction design and regulatory mechanism that will guarantee a successful auction. There may have been more room for improvement but over planning sometime does not bear good results. The stage has now been set for the auction. After the auction process is completed, a healthy mobile broadband market can be expected for the ultimate benefit of the broadband deprived Pakistani telecom users.

Current political and regulatory regime needs to be appreciated for its openness to the concerns of all stakeholders mainly operators which most of them have been amicably addressed.

Most important element is the structured manner in which the managers of the current process steered the changes in the IM and the transparency around the same.

A well-balanced auction design and regulatory mechanism will certainly guarantee a successful auction
