



PROLIFERATION OF BROADBAND THROUGH PUBLIC Wi-Fi NETWORKS



Consultation Paper

- **TRAI released a consultation paper on “Proliferation of Broadband through Public Wi-Fi Networks” on 13th July 2016; Consultation paper is available on website;**
- **Last date for Comments and counter comments was 24th August and 7th Sep respectively;**
- **60 comments and 7 counter comments have been received from various stakeholders;**
- **The comments/counter comments received have been placed on TRAI’s website;**

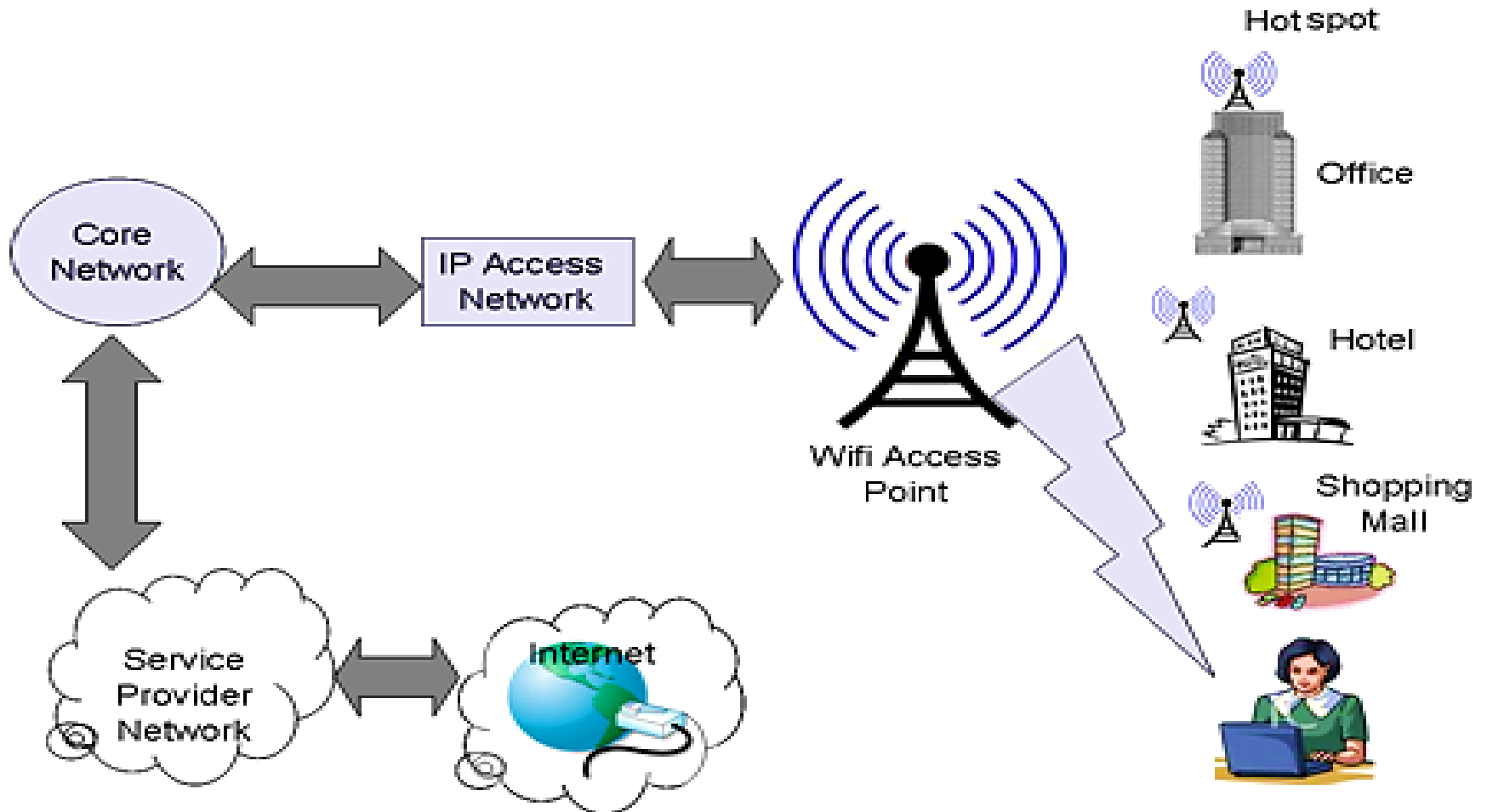


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Wi-Fi ACCESS THROUGH A Wi-Fi HOTSPOT



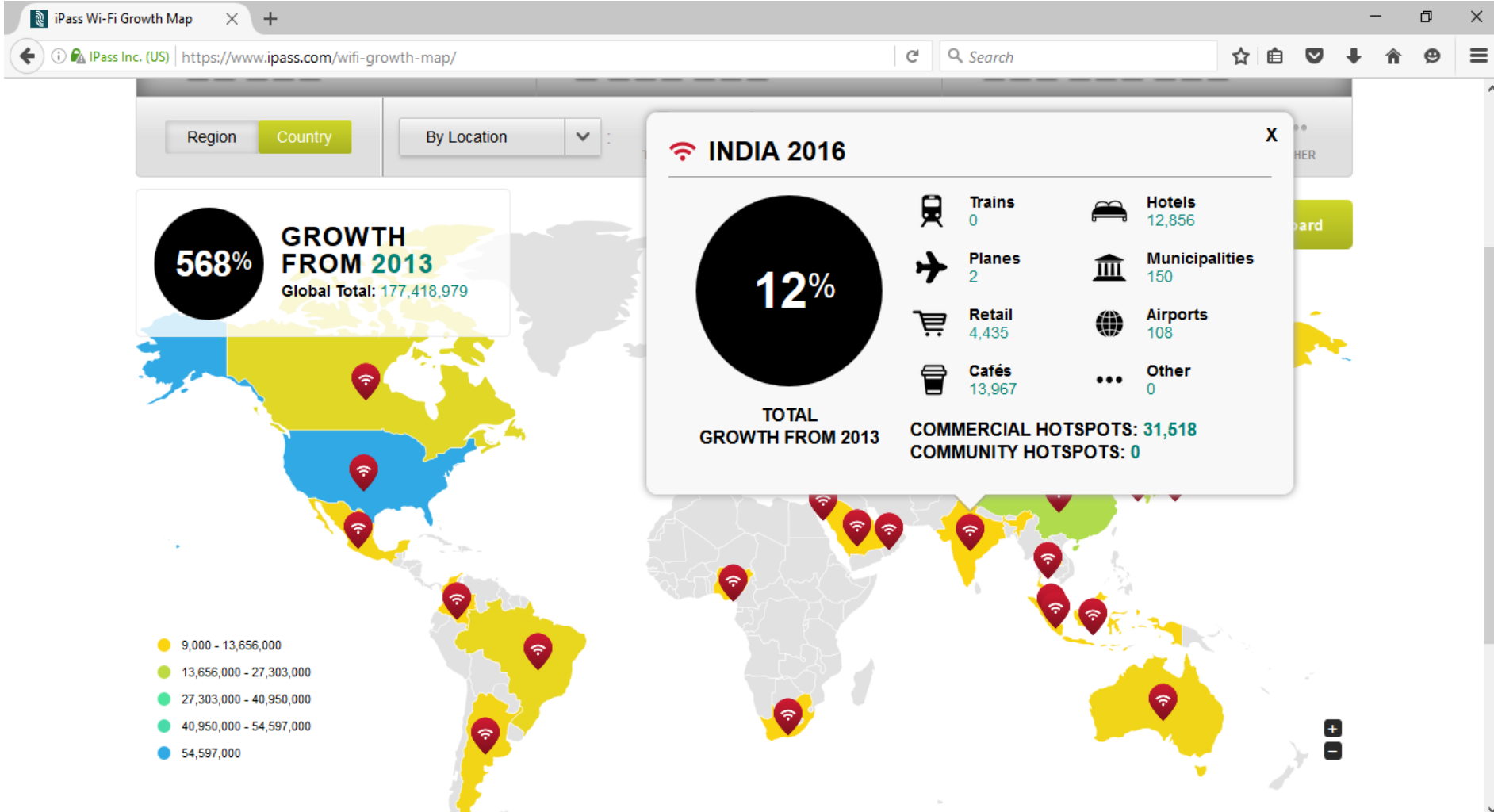


CURRENT STATE OF PUBLIC Wi-Fi

- In the Mobile World Congress of 2013, three organizations, namely GSMA, Wireless Broadband Alliance (WBA) and Wi-Fi Alliance jointly agreed to include “Trusted Wi-Fi” Network (cellular operator’s own Wi-Fi network), as an integral part of LTE (4G) Core.
- This led to structured 3rd Generation Partnership Project (3GPP) standards getting defined for seamless session handovers from 4G to Wi-Fi and vice versa, thereby affecting mobile data offload.
- This not only resulted in Wi-Fi assuming greater significance and focus from cellular operators but also established that – “Wi-Fi is a complementary technology, not competing”.

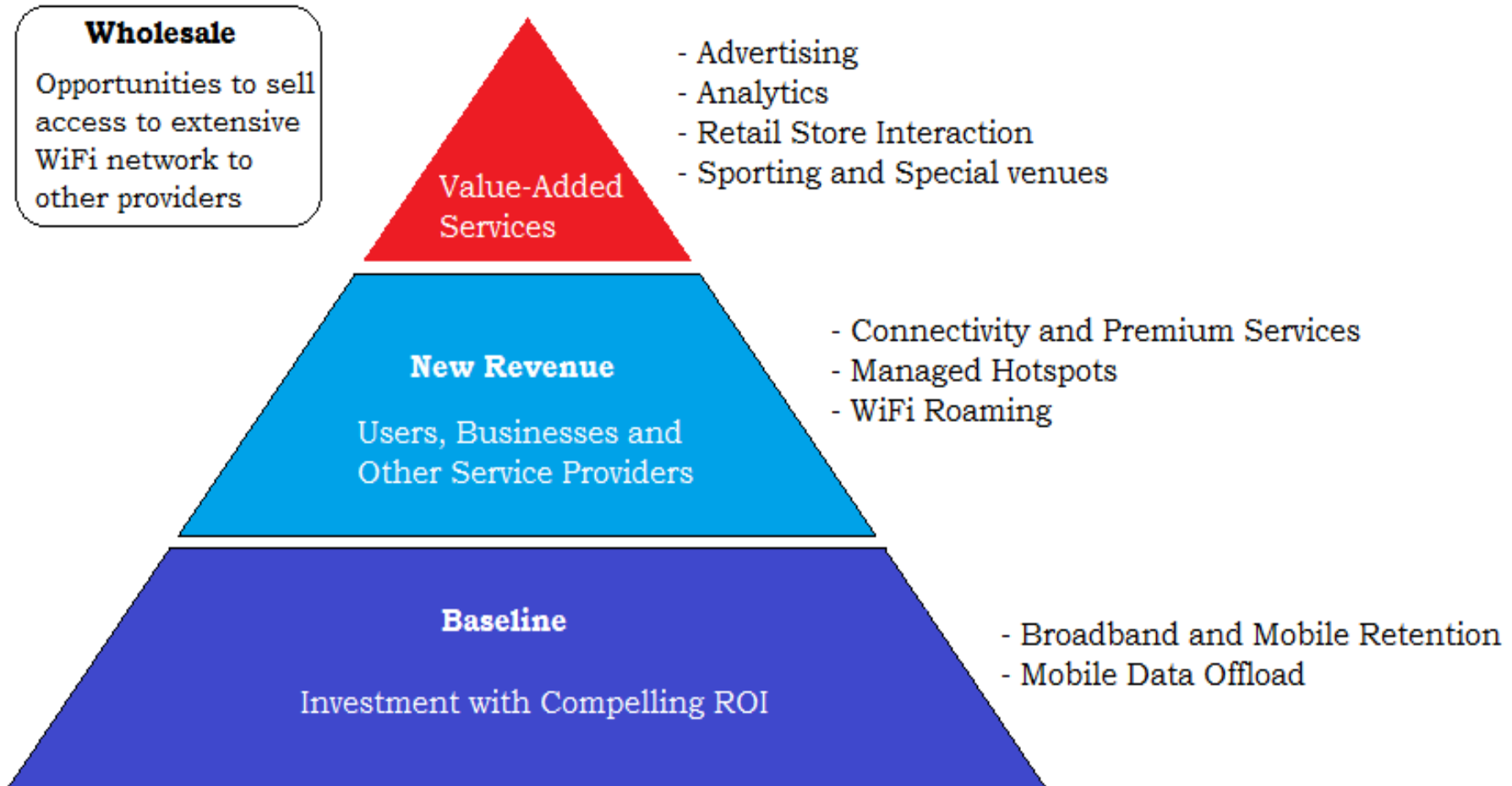


STATUS OF ADOPTION OF Wi-Fi





Wi-Fi MONETIZATION PYRAMID





ISSUES IN PROLIFERATION OF Wi-Fi NETWORK

- **Availability of Unlicensed Spectrum**
- **Business Viability and Incentives**
- **Logistics of Deployment of Public Wi-Fi**
 - *Customer log-in experience*
 - *Access by international travellers*
 - *Infrastructure sharing/ Roaming facilities*
 - *Payment Procedures*



Present Modes of Payment

- **Available modes of payment are very limited;**
- **Online transactions on public networks risk the theft of financial information of the user;**
- **Operators have back-end arrangements with different payment gateways and no single platform is available for use across the country;**
- **Physical vouchers also suffer from logistic problems and associated distribution costs;**



Flexible Interoperable Architecture

- **There is a need to have an architecture/platform which provide for registration of the ISPs on to the platform and also all types of payment agencies/instruments;**
- **A customer should be able to register himself/herself on this platform using any payment instruments and access the Wi-Fi service seamlessly across the ISPs in any part of the city or any State of India**
- **Payment arrangement should be totally interoperable and agnostic to the payment instrument.**



Flexible Interoperable Architecture

- **A customer should be able to “pay as you go” so that s/he pays only for the amount and duration of data usage and not on the basis of already fixed data limits or duration;**
- **There should be complete traceability of access made by any customer so that all the security requirements are billed into the system to avoid any malpractices or security risks;**
- **It is also desirable to permit the customer to fix a limit on the money to be spent or the access of Wi-Fi service so that the customer is assured that his/her account will not be debited beyond a certain limit, unless expressly authorised;**



ISSUES FOR CONSULTATION

Interoperability:

What measures are required to encourage interoperability between the Wi-Fi networks of different service providers, both within the country and internationally?

What measures are required to encourage interoperability between cellular and Wi-Fi networks?

Is it feasible to have an architecture wherein a common grid can be created through which any small entity can become a data service provider and able to share its available data to any consumer or user?

What regulatory/licensing measures are required to develop such architecture? Is this a right time to allow such reselling of data to ensure affordable data tariff to public, ensure ubiquitous presence of Wi-Fi Network and allow innovation in the market?



ISSUES FOR CONSULTATION

Operational Issues:

Are there any challenges being faced in the login/authentication procedure for access to Wi-Fi hotspots? In what ways can the process be simplified to provide frictionless access to public Wi-Fi hotspots, for domestic users as well as foreign tourists?

Are there any challenges being faced in making payments for access to Wi-Fi hotspots? Please elaborate and suggest a payment arrangement which will offer frictionless and secured payment for the access of Wi-Fi services?



ISSUES FOR CONSULTATION

Operational Issues:

Is there a need for ISPs/ the proposed hub operator to adopt the Unified Payment Interface (UPI) or other similar payment platforms for easy subscription of Wi-Fi access? Who should own and control such payment platforms? Please give full details in support of your answer.



ISSUES FOR CONSULTATION

Hub Based Model:

Is there a need to adopt a hub-based model along the lines suggested by the WBA, where a central third party AAA (Authentication, Authorization and Accounting) hub will facilitate interconnection, authentication and payments? Who should own and control the hub? Should the hub operator be subject to any regulations to ensure service standards, data protection, etc?

What measures are required to promote hosting of data of community interest at local level to reduce cost of data to the consumers?



ISSUES FOR CONSULTATION

Regulatory and Licensing issues :

Are there any regulatory issues, licensing restrictions or other factors that are hampering the growth of public Wi-Fi services in the country?

What regulatory/licensing or policy measures are required to encourage the deployment of commercial models for ubiquitous city-wide Wi-Fi networks as well as expansion of Wi-Fi networks in remote or rural areas?

Apart from frequency bands already recommended by TRAI to DoT, are there additional bands which need to be de-licensed in order to expedite the penetration of broadband using Wi-Fi technology? Please provide international examples, if any, in support of your answer.



THANK YOU