

From: **D H Azad** <[azad.dh@gmail.com](mailto:azad.dh@gmail.com)>  
Date: Aug 29, 2016 11:42:58 PM  
Subject: Response to USSD Consultation Paper  
To: [advfea1@traf.gov.in](mailto:advfea1@traf.gov.in)

Dear Sir,

I've worked in senior management roles in large telecom company for over 11 years and also actively involved since 2005 in the development of Mobile Banking and MFS which pushed me to share my thoughts on the very relevant questions raised. I was also the first decision maker in the world to use USSD for delivery of MFS back in 2006 and since then worked intensely on the subject matter.

I hope the responses in the attached file can bring some clarity to the audience and would be glad to further clarify any point on the subject matter, if there is any need.

Sincerely yours

Delwar H Azad  
New York, USA.

### **Issues for Consultation**

Boloro India responses and justifications to the consultations are noted below.

#### **Q1: In your opinion, what should be the maximum number of stages per USSD session for mobile banking service:**

- (i) Five
- (ii) Eight
- (iii) Unlimited
- (iv) Any other (please specify)

*I prefer to reason in favor of "(iv) Any other". USSD session time is a global parameter across the entire network of the telecom service provider (i.e. 90/180/240 sec etc.) and within the session time it doesn't matter if the session consists of 1 or 8 stages. There shouldn't be any limitation on the stages as different financial services might demand for different kind of stages from 1 to 8-10 depending of service complexities. Telecom resource consumption doesn't vary in any way on number of stages but by duration of the session. We also have to note that Service Design is never a constant and continuously evolving around customer centricity and customer satisfaction. Moreover, telecom service providers define this network parameter (session time) depending on various network and service factors of the core services and it is irrespective*

*whether financial service providers design and use the same USSD session in one or more stages. Therefore, number of stages must not be a factor of pricing policy of USSD.*

**Q2: Which of the following methods is appropriate for prescribing the tariff for USSD based mobile banking?**

- (i) Cost-based tariff for outgoing USSD session for mobile banking; or
- (ii) Monthly (or periodic) subscription fee for the use of USSD for mobile banking services; or
- (iii) Any other method

We are in favor of “*cost plus*” tariff for both system or customer initiated USSD session. The key to any business is justification of investment and reasonable return on investment. Without ensuring a fair price with reasonable RoI, Telecom service provider will always be reluctant to invest in USSD and Network infrastructure. And, as USSD traffic can have impact on signaling congestion, Telecom service provider shall have a feasible business case around the pricing of USSD resources. We should also be aware that lump sum adhoc opaque tariff can seriously hurt the financial inclusion agenda of the Govt. Hence, Telecom service provider and regulators shall have full clarity of the costing of end-to-end USSD session while ensuring reasonable profit margin for the them to ensure incentives for quality of service, up-keeping and continued investment on the USSD and relevant network resources.

USSD Pricing, in our opinion, shall evolve in two stages towards maximum tariff efficiency and consumer benefits. Initially, in my opinion, the pricing should be done on full duration of USSD session. The costing of USSD session shall consist of clearly identified network, IT and other cost components including all relevant capex and opex involved in daily operations and maintenance for establishing end-to-end USSD session that shall be assessed and verified by subject matter experts and regulators. We have strong reason to believe that such an exercise would reveal a costing of less than 50 paisa per 180 seconds of USSD session. If telecom service providers fail to provide detail “clearly identified and verified component level costing” then regulators may arbitrarily set a USSD session based flat pricing of 50 paisa or less for a base USSD session duration of 180 seconds. There can also be wholesale price for thousands of sessions that can purchased by financial service providers at a competitive market price where regulators may set a price ceiling based of component based costing under which a competitive market may develop similar to bulk SMS pricing.

As telecom resource costs are calculated per unit seconds, in later stage of session based tariff (say 12/18 months later), TSPs can pay for cumulative actual usage seconds of collective USSD sessions based on flat price per session as base line. Which will ensure fairness for Telecom service providers as well as TSPs as very low percentage of the total USSD session will use the full duration of the USSD session for which the floor price per USSD session is set.

**Q3: What methodology should be used for estimating the cost per USSD session for mobile banking service?**

This should be a clearly identified relevant component based costing (network, IT and other cost components) including all relevant capex and opex involved in daily operations and maintenance “specifically” for establishing end-to-end USSD session and that shall be assessed and verified by subject matter experts and regulators.

**Q4: If your response to the Q2 is ‘Any other Method’, please provide full details of the method.**

I’ve supported cost plus method.

**Q5: Whether it would be appropriate to mandate the service providers to levy charges for USSD session for mobile banking only if the customer is able to complete his/her transaction? If yes, please describe the method to implement such an arrangement technically?**

No I don’t think that will be fair unless the failure is attributed to network quality of service. Irrespective of whether a transaction is successful or not, network resource of telecom service provider is consumed and should be “fairly” compensated if the cause of failure lies with the financial service provider or their customer. It is the responsibility of the Financial service provider who own and maintains the relationship with the end user and merchants to educate, design service smartly to avoid network resource abuse. Inefficiency and lack of due diligence created at financial service provider’s end shall not be unfairly passed onto the telecom service provider who perform just as a conduit.

**Q6: Whether the present pricing model for USSD-based mobile banking in which consumers pay for the use of USSD should continue?**

We have to always be customer friendly and ensure a fit & proper mechanism delivering a better deal for the end users. Present consumer’s pay model should be discontinued on the fact that individually customer does not have the collective negotiation power, ability to fairly reconcile with telco or control grievance resolution resulting in lower uptake of service. Financial Service provider shall price their services in such a manner so that they can take up the USSD costs similar to cost components for delivering their services. Financial institutions or any service provider always factor in all capex and opex for successfully delivering the services to the end user and USSD is most critical service delivery conduit which should be considered accordingly. If we look at all the successful MFS models across the world, one common denominator we could easily identify among all providers is that mobile financial service provider never passed the USSD costs onto the end users. Passing USSD costs onto the customer becomes an effective entry barrier for end user and detrimental to the financial inclusion agenda of the govt. of India.

**Q7: In case your response to the Q6 is in the negative, what should be alternative pricing models? Please provide justification in support of your response.**

I’ve explained in detail and justified against Q2 and Q6.

**Q8: Keeping in view the concerns raised by the TSPs, whether there is a need for allowing USSD push sessions when customer-initiated USSD session is dropped due to some reason so that the customer can complete his/her unfinished transaction? Please support your response with justifications.**

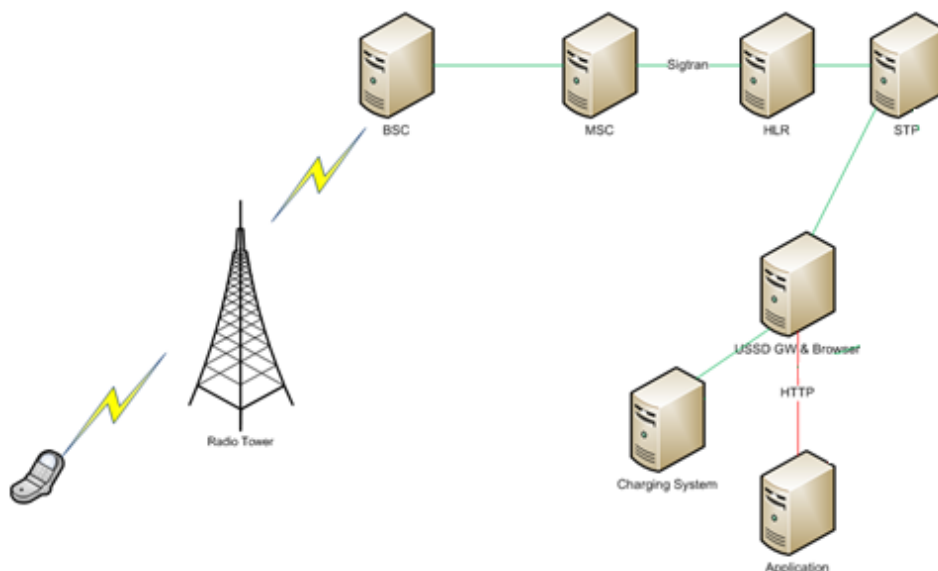
Telecom service provider should have indifferent view on how the service is designed in meeting their customer need, satisfaction and uniformly provide both Push & Pull USSD session on demand either by the end user or by financial service providers for the cost plus tariff model discussed above. The intent here is very clear, to serve the customer better in service fulfillment for the interrupted service. Financial service providers shall focus on smart service designs whereby customer can enjoy the service with minimal involvement.

**Q9: Whether it would be appropriate to allow all variety of mobile payment services apart from the mobile banking services on the existing USSD Aggregation platform(s)? Please support your response with justification.**

Do we differentiate a leased line if it is used for transmission of image, voice or any other contents? Or, any IP session for browsing internet? Then why should USSD, which is nothing but an IP Session should be earmarked for any specific product or service segment? In our opinion, the USSD is another telecom resource like many other use case of which shall be left to the innovative capacity of the market and service providers.

**Q10: Is there any other relevant issue which should be considered in the present consultation on the review of regulatory framework for the use of USSD for mobile financial services?**

For getting into the USSD session costing exercise, we've to understand the end to end technology and components involvement which is briefly described below:



When a USSD session is initiated by a mobile, the mobile occupies radio resources in the same fashion like a voice call and occupies the radio channel for the whole period until the session is terminated. This consumes radio equipment and spectrum capacity as well as equivalent capacity of supporting resource components like tower, power, battery, infrastructure etc.

After radio base station the USSD session consumes resources from access transmission network which conveys USSD session information bits up to BSC/RNC. In BSC/RNC the USSD session is treated similar to a call and reserves required resources for necessary control functions. After BSC the call reaches core network (MSC) through core transmission network and required capacity for the USSD session is consumed both in core transmission and MSC side.

MSC performs the switching functionality of the USSD session. Another important node involved in a USSD session is HLR for subscriber profile storage and access. USSD Gateway capacity is used for communicating to external application server of MFS service providers.

Charging capacity is used for charging USSD session and STP capacity is used for transferring signaling between MSC to HLR/Charging system. USSD sessions take proportionate capacity of other supporting functions like Network Monitoring System, Operation and Maintenance etc. as well.