## **ONS** Implementation

William Cobb
VP, Network Engineering
CSDVRS
15 May 2008



#### Five Concerns about the Joint Proposal

- Closed system...VPs outside are excluded
- Phone number is tied to a provider's device
- Providers control change...it's their system
- Automatic E9-1-1 support is provider based
- Must also have URI for a complete system



# System Attribute Comparison

Critical Attributes	CSDVRS Proposal	Joint Proposal	Neustar Proposal
System type	Open	Closed	Closed
Phone Number Association	User	Device	Device
Universal E9-1-1	Yes	No	No
Operational System	Yes	No	No
Capable of rapid implementation	Yes	No	No
Providers required for Deaf to Deaf calls	0	1	2
Cost effective and low cost	Yes	No	No
Supports current VP base	Yes	Yes	No



#### **ONS** Architecture

**ONS Database** 

**ONS DNS** 

ONS USER DB

**ONS Registrar** 

**USER** Registration

Number Issuance

**Updater Install** 

ONS E9-1-1

VPC Support from VoIP network provider **ONS VoIP Network** 

**VoIP Network** 

Provider Network
Trunks

**Number Acquisition** 



## **ONS** Registrar

**ONS** Registrar

**USER** Registration

Number Issuance

**Updater Install** 

- Application for user registration, issuing and management of phone numbers and management of the user location information
- Updates the ONS USER DB

Timeline						
Item	Status	Specify	Develop	Test	Production	
Develop ONS User DB and Registration Web						
Application	TBD	May-08	Jun-08	Jul-08	Aug-08	
Number Issuance	TBD	May-08	Jun-08	Jul-08	Aug-08	
Updater Software and Hardware	Available				May-08	
Costs						
10 Digit Numbers	\$.75/number/month					
Number Porting	\$5/number					
ONS USER DB Monthly Service	\$30,000/month (\$.30/number/month)*					
* based on 100,000 numbers		•				



### **ONS VoIP Network**

**ONS VoIP Network** 

**VoIP Network** 

Provider Network
Trunks

**Number Acquisition** 

- VoIP network for termination of PSTN calls
- SIP trunks to each provider
- E9-1-1 support included on SIP trunk
- Providers will need softswitch for SIP trunks and ANI insertion for E911 calls

Timeline						
Item	Status	Specify	Install	Test	Production	
Select wholesale carrier and VoIP network	TBD	May-08	Jun-08	Jun-08	Jul-08	
Install SIP Trunks	TBD	May-08	Jun-08	Jul-08	Jul-08	
Item	Status	Specify	Develop	Test	Production	
Develop Application to manage ENUM	TBD	May-08	Jun-08	Jun-08	Jul-08	
Develop Application for ONS User DB to update						
VPC	TBD	May-08	Jun-08	Jul-08	Aug-08	
Costs						
SIP Channels for In & outbound calls	\$17/channel					
Common VPC charge	\$200,000/month (\$2/number/month)*					
* based on 100,000 numbers						



### **ONS** Database

**ONS Database** 

**ONS DNS** 

ONS USER DB

- ONS Dynamic DNS database service
- ONS USER Database system management

Timeline						
Item	Status	Specify	Develop	Test	Production	
Develop ONS USER DB	TBD	May-08	Jun-08	Jun-08	Jul-08	
Develop ONS DNS	Available				May-08	
Costs						
ONS DNS Monthly Service	\$50,000/month (\$.5/number/month)					
* based on 100,000 numbers						



### Timeline and Pro Forma Cost

Implementation Schedule					
Item		May-08	Jun-08	Jul-08	Aug-08
Develop ONS User DB and Registration Web Application		Specify	Develop	Test	Production
Number Issuance		Specify	Develop	Test	Production
Select wholesale carrier and VoIP network		Specify	Install	Produc	tion
Select and Install SIP Trunks		Specify	Install	Produc	tion
Develop Application to manage ENUM		Specify	Develop	Test	Production
Develop Application for ONS User DB to update VPC		Specify	Develop	Test	Production
Pro Forma Monthly Cost - Provide	ler viev	V			
Assumptions					
200,000 minutes outbound LD per month					
50,000 minutes inbound LD per month					
50 SIP channels required for peak call volume					
5,000 10 digit numbers					
250 numbers ported in monthly					
500 numbers issued monthly					
40 "updater" routers issued					
LD costs \$.018/minute (in & outbound)					
Costs	Rate	Quantity	Price		
LD Charges	\$0.018	250,000	\$4,500		
SIP Channels	\$17.00	50	\$850		
Number charge	\$0.75	5,750	\$4,313		
Porting charge	\$5.00	250	\$1,250		
ONS DB charge*	\$0.50	5,750	\$2,875		
Common VPC charge*	\$2.00	5,750	\$11,500		
"Updater router"	\$17.00	250	\$4,250		
* includes 500 new and 250 ported in numbers			\$29,538		
Revenue					
200,000 VRS minutes	\$6.50	200,000	\$1,300,000		
ONS cost as percent of revenue	2.3%				



#### ONS...is the choice

- Proven system...basic system operating today...hardware and software
- Universal E9-1-1 support from the start
- Rapid development and implementation
- Minimal interface development for providers
- Cost effective
- Support for migration to SIP



### Questions

?????

