Appendix B - Bandwitdh

Protocol overhead x RTP packet	**Bytes**					
IP	20					
UDP	8					
RTP	12					
SRTP HMAC 32	4					
	44					
Audio Codec Frame size	**Bytes**	**Duration in millis**				
AMR 4.75kb	13	20				
AMR 12.2kb	32	20				
GSM	33	20				
PCM	160	20				
ptime	**Duration in millis**	**Audio Frames x RTP packets**	**RTP packets x second**	**R T P packet size**	**Bytes x second x channel**	**Bytes x second**
AMR 4.75	100	5	10	109	1090	2180
AMR 12.2	100	5	10	204	2040	4080
GSM	20	1	50	77	3850	7700
PCM	20	1	50	204	10200	20400
AMR 4.75 kbs	Used by Android, Blackberry OS 7.0 and iphone					
AMR 12.2 kbs	Used by Blackberry OS 5.0					
GSM	Used by SNOM					
PCM	Used by SIP trunks and/or SNOM					

Appendix A - Scenarios

Appendix C - Server Sizing