



CASE STUDY:

VoIP IMPLEMENTATION AT WHITE STAR HOTEL

THE CHALLENGE

White Star is a large hotel located in US's West Coast serving guests coming from Asia, Europe, Latin America and US. With a majority of its customers being business persons, there is a large volume of long-distance and international phone calls made from the hotel which are routed in the traditional telephone network (PSTN).

A feasibility study on VoIP was carried out and concluded with the following two main points:

- The VoIP voice quality is indistinguishable from the traditional phone calls.
- Rates for VoIP calls charged by Savytel represent a large saving, compared to the rates charged by the traditional telephone service providers.

Based on this result, the management decided that VoIP should be implemented so that the hotel can offer its guests a large saving on their telephone calls, which is considered as a major competitive advantage.

THE EXISTING TELEPHONE NETWORK

The hotel has a typical PBX telephone network connected to PSTN:

- Connection from its PBX to PSTN via 2 PRI T1's providing 48 channels.
- A telephone traffic from the hotel guests to the called numbers splits in the following mix: 30% to Asia, 35% to Europe, 15% to Latin America and 20% to North America.
- The monthly average telephone bill (charged to the hotel by PSNT service providers) is following (all in US\$):
 - The rental of 2 PRI T1's (for voice): $(544.00 \times 2) = 1088. \$$
 - Telephone calls from its guests to destinations in Asia, Europe and Latin America: 15,000. \$
 - Telephone calls from its guests to North American destinations: 3000. \$
 - The average monthly telephone expense: $(1088 + 15,000. + 3,000.) = 19,088.$

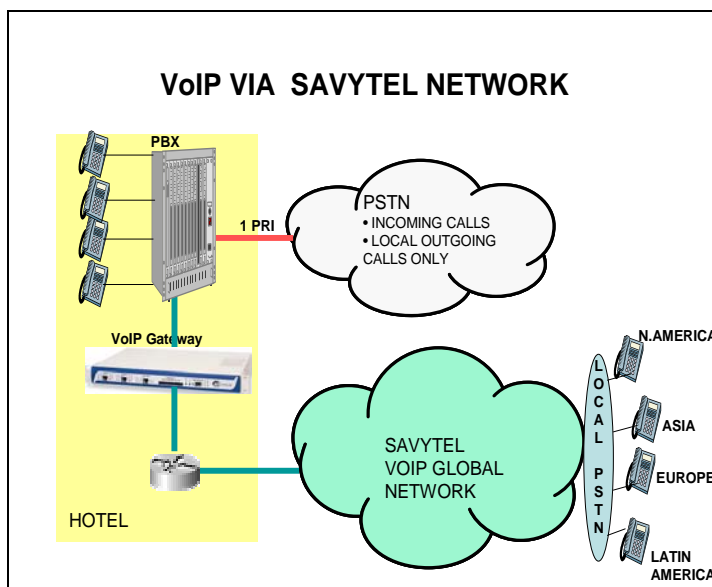
VOIP IMPLEMENTATION AT WHITE STAR HOTEL USING SAVYTEL VOIP NETWORK.

A VoIP implementation at the White Star hotel, aiming at routing the calls from its guests from PSTN to Savytel VoIP network for long-distance North America calls and international calls, is shown in the picture below:

- A VoIP Gateway, connected to PBX on one side and to its router on the other side, is used to route outgoing long-distance and international calls via Savytel VoIP Global Network.
- The PSTN connection is used only for outgoing local calls and for receiving incoming calls. As a result, only 1 T1 is needed to connect the PBX to PSTN.

This is how it works:

- Long-distance and international outgoing calls are placed by guests and are recognized by the PBX.
- The PBX routes the calls to VoIP Gateway.
- VoIP Gateway routes the calls to Savytel VoIP Global Network.
- The calls will be set up as from the hotel's VoIP Gateway, throughout Savytel VoIP network, and delivered to the destination as a VoIP call.
- At the remote Point of Presence, the call will be delivered to the local PSTN.





COST OF EQUIPMENT INVESTMENT

The cost of equipment investment for the VoIP implementation is the cost of one VoIP Gateway with a sufficient capacity to handle the existing traffic volume. Quintum VoIP Gateway Tenor DX4048 with 48 channels, 4 T1/E1/PRI ports is selected. The list price for this Gateway is 8250.00 US\$.

The capacity of the hotel existing router and Internet (WAN) connection is sufficient to handle the VoIP calls (which use bandwidth-efficient codecs from 5 kbps to 15 kbps) and therefore does not require a new investment.

SAVING

A comparison of the rates offered by the hotel's PSTN service providers and those offered by Savytel, given the present traffic volume and the existing destination mix of international calls to Asia, Europe and Latin America, shows that:

- The monthly bill charged by Savytel would be at 25% of the current monthly bill, resulting in a saving 75% of the existing bill.
- The monthly total saving:
 $(1088 + 20,000 + 3,000) - (544 + ((20,000 + 3,000) \times 0.35)) = 17,794$.

RETURN OF INVESTMENT (ROI)

With the monthly saving at 17,794. US\$ while the cost of the equipment being 8250. US\$, the expense of equipment investment can be recouped in less than one month.