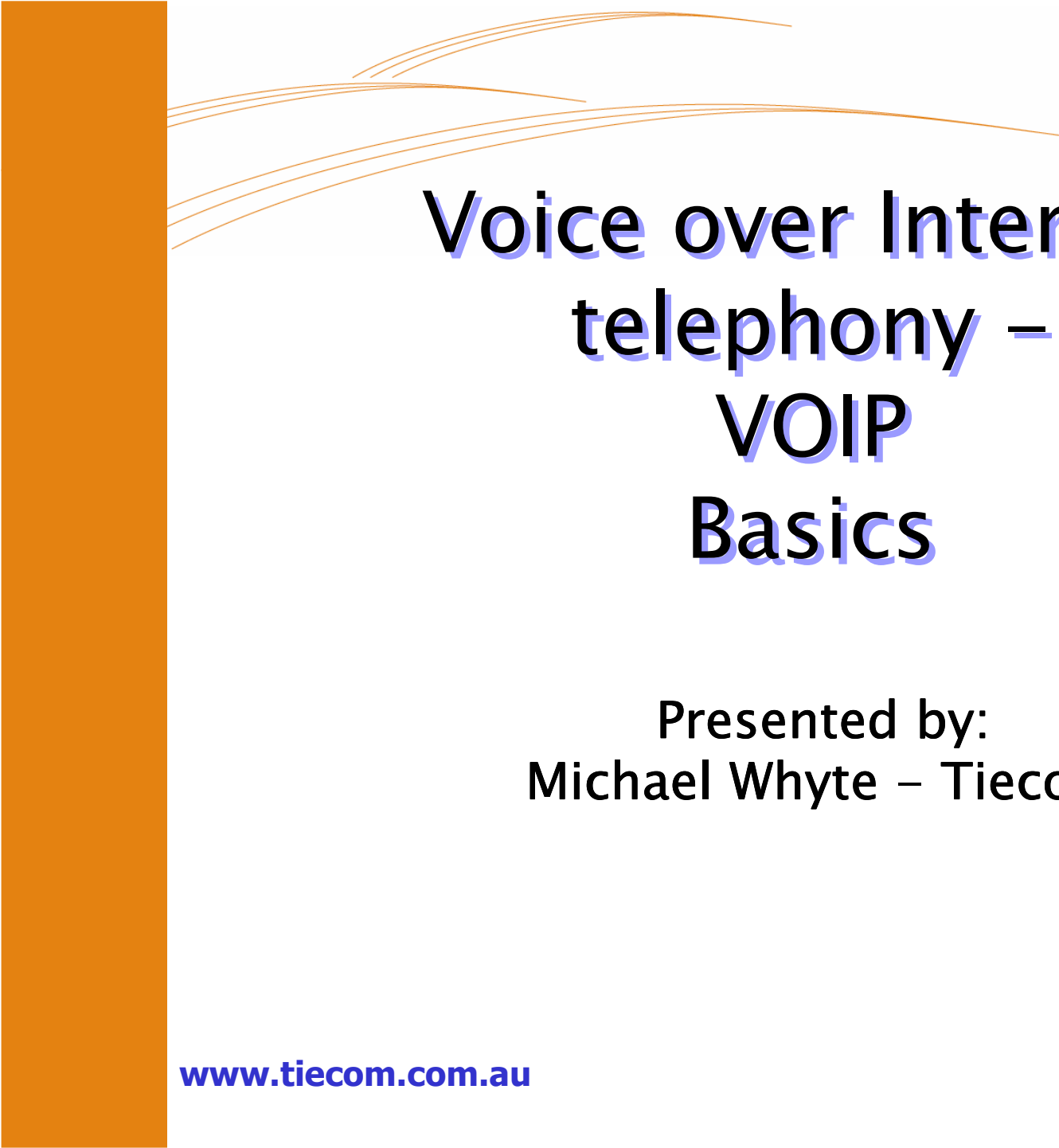




Voice over Internet telephony – VOIP Basics

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- Who are Tiecom
- What is VOIP?
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- VOIP traps and challenges
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Who are Tiecom?

- Tiecom are a provider of voice and data equipment specialising in PABX and Voice over IP solutions. Our installations range from 10 handsets to sites with over 2,500 handsets.
- Tiecom have over 15 years experience in voice solutions.
- Major Customers Include:



MYER



Angus & Robertson

WATTYL

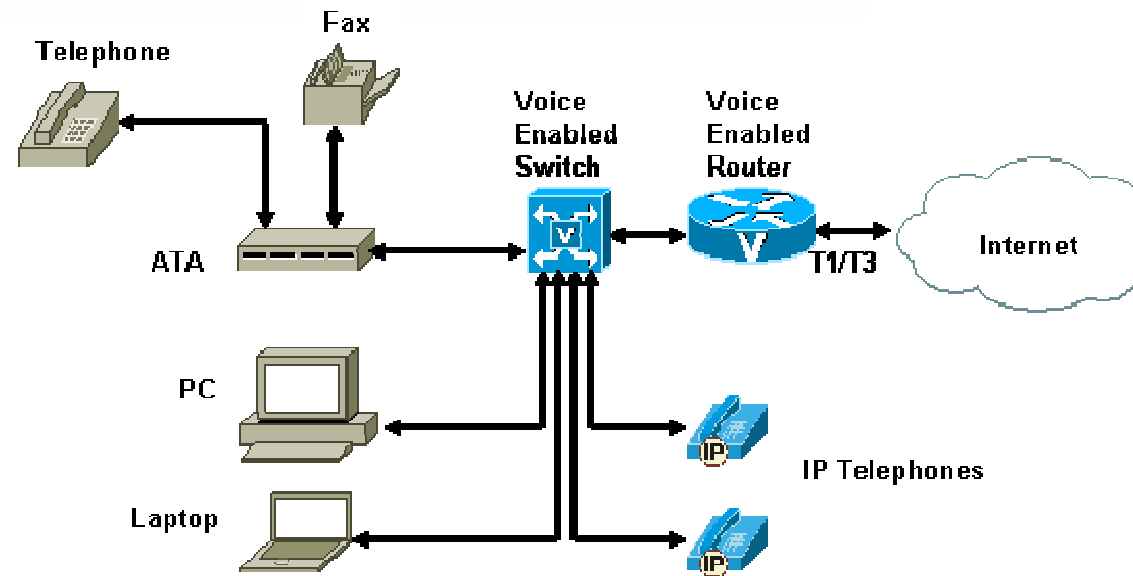
www.tiecom.com.au

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What is VOIP?

- **Voice over Internet Protocol** is the routing of voice conversations over the Internet or any other IP-based network. The voice data flows over a general-purpose packet-switched network, instead of traditional dedicated, circuit-switched voice transmission lines.
- Protocols used to carry voice signals over the IP network are commonly referred to as **Voice over IP** or **VoIP** protocols. Typical VoIP protocols include: SIP, H323.
- Voice over IP traffic might be deployed on any IP network, including ones lacking a connection to the rest of the Internet, for instance on a private LAN's or WAN's.

VOIP Small Office Example



Notes:

- One network cable is used for PC and IP Handset
- Faxes and traditional handsets require a "Analogue to IP adaptor"

VOIP Devices



IP Handsets



Wireless IP Handsets



PC based soft phone



IP PDA'S

VOIP Advantages

COST

- Major cost savings occur when two or more users are talking to each other over STD distances. For example a traditional long distance call using Telstra may incur a charge of \$ 5.00. A VOIP call will not incur any charge over the same distance. (or may incur a flat rate charge depending on the VOIP carrier)
- Other cost savings occur if a business runs multiple sites. If call traffic between sites is a considerable cost per month then a VOIP implementation may be considered to save costs.
- The larger the business the quicker the return on investment with VOIP. As other areas for cost saving is the use of only one network cable for phone and PC.

FLEXIBILITY

- Incoming phone calls can be automatically routed to your VoIP phone, irrespective of where you are connected to the network. Take your VoIP phone with you on a trip, and anywhere you connect it to the Internet, you can receive your incoming calls.
- VoIP phones can integrate with other services available over the Internet, including sending and receiving messages or data files in parallel with the voice conversation, audio conferencing, managing address books and passing information about whether others (e.g. friends or colleagues) are available online to interested parties.

VOIP traps and challenges

- Implementation costs can be high for small business sites as equipment is expensive.
- Complex layer 3 switches and routers are required to ensure the quality of the voice call does not incur the following:
 - Echo
 - Latency
 - call drop outs

➤ RELIABILITY

- VOIP calls are at the mercy of the Internet. I.E. – The voice call is mixed with all other packets such as http, email, ftp, video.
- If the voice call does not have priority over other packets in the internet there is no guarantee of voice quality

SKYPE – How does it fit in with the VOIP picture ?

- **Skype is a software program for making free calls over the internet to anyone else who also has Skype.**
- Users download the software and make calls using a headset connected to a PC
- Ideal for personal – e.g. calling brother in London
- Tiecom recommend a good quality headset to improve voice quality of calls.
- Not recommended for business use , however for informal business use and saving costs on long distance calls it is an ideal service.



Q & A

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