

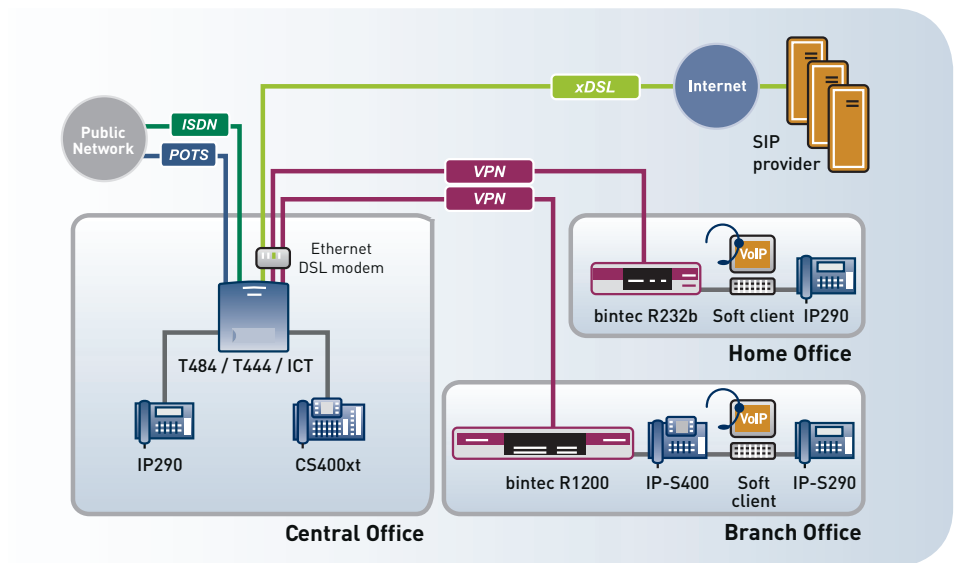
## Application Sheet Integration of a Remote Subsidiary via VoIP

An increasing trend towards using home offices is apparent in many companies. Besides field service staff, for reasons of flexibility, part-timers in home offices are increasingly connected with their company headquarters. The aim is that these employees can work just as though they were employed in the central office. This gives rise to numerous advantages, e.g. integration in central office teams, ideally busy status information of all integrated staff, a unified company number to the customer, telephone cost billing via the central company connection, central phone book and not least the strict separation of private and company connections. It is advantageous that this solution does not require any intervention in the existing phone infrastructure at the external site. Many of these advantages are also of relevance to small company branches with a maximum of 1-2 extensions.

Another advantage is that data can be communicated with the central office via secure VPN connections. This should also include the option of voice prioritization for phone calls.

### Benefits / Highlights:

- ▶ More flexibility through the use of IP phones compared with ISDN or analog based standard phones
- ▶ IP phone obtainable via internal call number  
Further functions, e.g. call waiting, call back, call transfer, 3-party conference
- ▶ IP phone visible in the system phones' busy lamp field
- ▶ Registration status via WIN Tools or Control Center
- ▶ Unified call number structure between central office and subsidiaries
- ▶ PBX trunk lines may be used for external connections
- ▶ PBX codes / system functions may be used from a remote location  
For example, call forwarding, MSN-related trunk line busy, bundled codes, room monitoring
- ▶ Full system functionality (team, busy lamps, central phone book, etc.) for integrating an IP system phone in the ICT series
  - ▶ Use of a VPN tunnel with IPSec for max. security
  - ▶ VPN-IPSec connections exclude the possibility of manipulation or eavesdropping
  - ▶ Diverse setting options for voice-data prioritization



### Solution:

An R series router with IP phone can be used in the home office. This IP phone logs on to the FEC PBX directly and is therefore completely integrated in the system. This facilitates the standard telephony functions, such as call waiting, call back, call transfer, 3-party conference between central office and home office. The busy status of the IP phone is also displayed on the system phones at the central office.

If an elmeg ICT system with the internal VoIP-VPN gateway is used, IP system phones can be integrated via a VPN tunnel. The home office then has the full functionality of a system phone at the central office, e.g. busy information for all subscribers and the central phone book.

If an elmeg ICT system is used or an R series router at the central office, the voice connection and data connection, which is also possible, can be rendered even more secure using a VPN tunnel with the highest encryption. In both cases, settings are possible to improve the voice quality and for dynamic broadband management (QoS).

# Application Sheet

## Integration of a Remote Subsidiary via VoIP

### PROJECT REFERENCES:

- ▶ The company 'Best, Herr Ronald Thieme', Geringswalde and Leisnig sites
- ▶ The company 'Notus Potsdam', Potsdam, Berlin, Bulgaria, Mexico sites

### ROUTERS:

#### bintec R232b(w)



- ▶ Art. No. 24215 (R232b); 24211 (R2342bw)
- ▶ ADSL2+ modem, 4-port switch and WLAN (not for R232b) in one device: Simple installation in the home office or branch
- ▶ Remote configuration for centralized management
- ▶ 5 VPN tunnel, IPSec, VoIP-capable
- ▶ ISDN port for remote maintenance or DSL backup
- ▶ SIP proxy

#### bintec R1200



- ▶ Art. No. 24231
- ▶ Variably applicable with Ethernet WAN (4+1 port switch)
- ▶ Hardware accelerator
- ▶ Applicable as a branch device (basic version) or as a central device (more tunnels per expansion license)
- ▶ Device redundancy through BRRP
- ▶ Connection to RADIUS server
- ▶ DSP slot for VoIP
- ▶ Load balancing
- ▶ Failure tolerance

### MODULAR PBXs:



#### elmeg ICT

- ▶ Art. No. 1091433 (ICT46); 1091441 (ICT88); 1091450 (ICT880)
  - ▶ ICT with integrated voice application
  - ▶ Modular expandable
  - ▶ Alarm messages can also be processed via the Contacts module
- PBX can be expanded with an additional module for VoIP, hybrid operation



#### VoIP-VPN gateway with DSP

- ▶ Art. No. 1091913 (M VoIP-VPN gateway); 1092189 (M 4 DSP); 1092316 (M 8 DSP); 5510000041 (M 32 DSP)
- ▶ The VoIP-VPN gateway module supplements the elmeg ICT systems. It unifies Internet telephony (VoIP) with the secure data exchange over VPN. Two integrated slots for DSP expansion modules additionally provide the VoIP-VPN gateway with digital, highly compressed voice channels for the transition into the PSTN.

### COMPACT PBXs:



#### elmeg T444

- ▶ Art. No. 1091212
- ▶ Compact entry-level system
- ▶ The 4x DSP modules (Art. No. 1092189) are required for VoIP



#### elmeg T484

- ▶ Art. No. 1091000
- ▶ Modular compact system
- ▶ TFE & Contacts module
- ▶ Integrated voice boxes
- ▶ The 4x DSP modules (Art. No. 1092189) are required for VoIP

### SYSTEM PHONES:



#### elmeg IP-S400

- Extended IP system phone
- ▶ Art. No. 1091735 / 1091743
  - ▶ For use of the ISDN system telephony functions
  - ▶ Connection of DSHG headsets
  - ▶ 7-line illuminated display
  - ▶ Keyboard extensions possible
  - ▶ Power over Ethernet
  - ▶ Only in combination with the ICT



#### elmeg IP-S290plus

- IP system phone
- ▶ Art. No. 5510000013
  - ▶ For use of the ISDN system telephony functions
  - ▶ Connection of DSHG headsets
  - ▶ 2-line display
  - ▶ Power over Ethernet
  - ▶ Only in combination with the ICT

### SUPPLEMENTARY COMPONENTS:

#### bintec switches with PoE

- ▶ Supply for IP-S phones by means of PoE
- ▶ Unified operation - Unified Funkwerk GUI
- ▶ Special setting for broadband management and voice-data prioritization



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