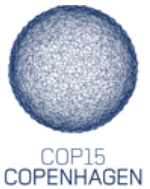




## *Unified Communication – Voice over IP*



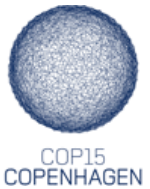
***”It’s all about staying in touch”***



***The Danish Host Country  
COP15 Partnership with Swyx***

***John Kiarie  
UN, ICT***

***Peter Hammerich  
Svar:-), Swyx COP15***

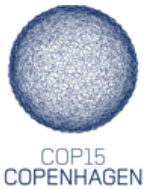


- 
- *Introduction*
  - *The evolution of Corporate Communication*
  - *POTS (plain old telephone service)*
  - *Enabling the network, to empower the user*
  - *Management and administration*
  - *The solution*



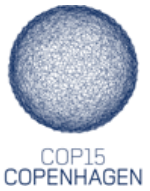
# Scope for the COP15 UN Staff

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*A stable and secure 24x7 communication platform for more than 300 users*

- *High availability with maximum security*
- *User centric VoIP solution*
- *300 Mobile phones with full integration to the system*
- *Callcenter Communication Platform*
- *Conference setup for multiple participants*
- *Full monitoring and logging*
- *Statistics reporting every day*



# The Evolution of Corporate Communication: History Repeated

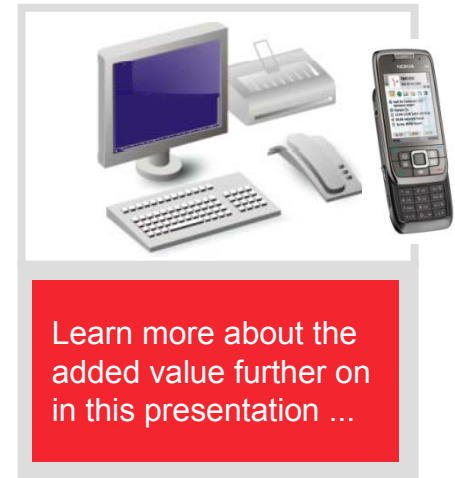


Few enhancements through decades like character wheel, display, correction function, BUT ...



Few enhancements through decades like function keys, speed dials, displays, ISDN „comfort“, BUT ...

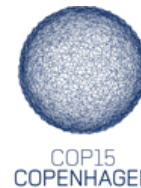
**... only the adoption of PC & Networking introduced groundbreaking added value!**



Learn more about the added value further on in this presentation ...



## POTS (plain old telephone service)

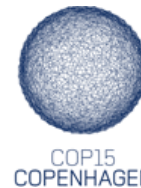


- ❑ *“Location centric” technology*
  - ❑ *communication networks and applications route calls, pages, and faxes to specific devices allocated “to” specific offices instead of to specific people.*
  - ❑ *Features, functions and changes indiscriminate of user types*
  
- ❑ *Single point of failure*
  - ❑ *Tied to facility and offices*
  - ❑ *Switch board operators*
  
- ❑ *Complicated time consuming*
  - ❑ *physical deployments*
  
- ❑ *High operational and maintenance*
  - ❑ *costs and overhead,*
  
- ❑ *No flexibility & No mobility*





# Unified Communication - VoIP



- *IP based telephony*

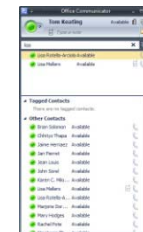
- **Skype VoIP**

- *Easy installation*
- *Single user system*
- *Consumer based solution*



- **Office Communicator**

- *Presence and directory information in focus*
- *Intranet solution with third party PBX gateway for outside calls*
- *A collaboration tool*



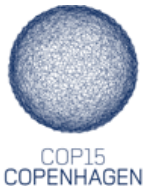
- **Swyx Younified Communication**

- *Enterprise business solution with extended callrouting facilities*
- *Integration to business applications, SDK based on .NET*
- *Extended presence and mobility*
- *Infrastructure based on a Microsoft AD environment*
- *Extended conference handling*
- *Full PBX functionalities*





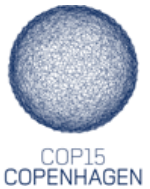
## Enabling the network, to empower the user



- *High return on investment (ROI) with reduced Total cost of ownership (TCO) on communications*
  - *e.g. IVR implementation (no dedicated operator)*
  - *Conference call center*
  - *Costing/licensing based on usage*
- *Least cost routing*
  - *Internet or GSM calls based on least cost*
- *End user flexibility on interface*  
*Desk-phones, soft-phones, headsets, handsets, BB bluetooth, etc.*



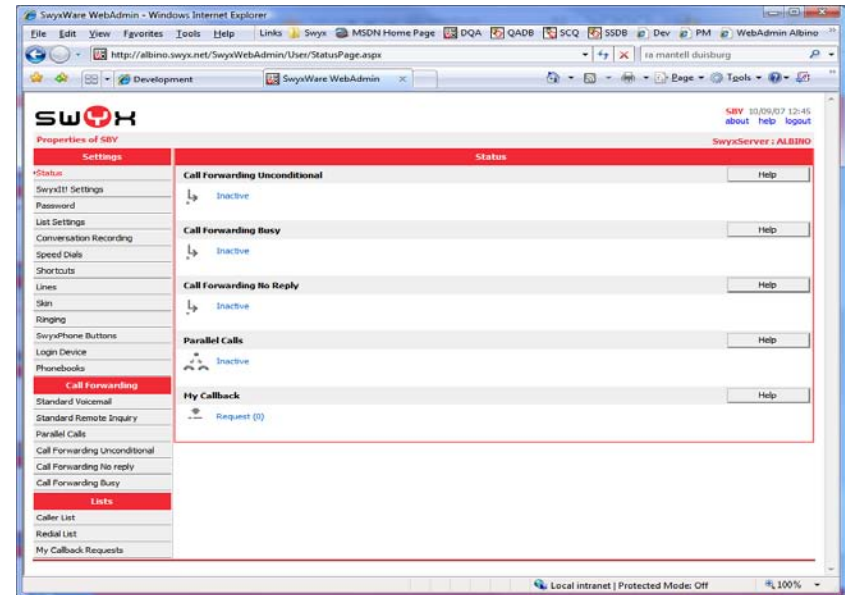
# Unified Communication



## User Centric Platform

The solution is based on a user centric platform, with focus on the individual needs of integration, presence handling, **one-numbering strategy with single-point-of-contact** and follow me, and benefits like:

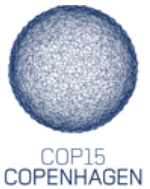
- Calender integration
- Contact database integration
- Mobile integration
- Voicemail
- Instant messaging
- Personal voicemail
- Call recording
- Audio Conference
- Interactive voice respons
- Fax service for every user
- User web for easy callrouting by-user





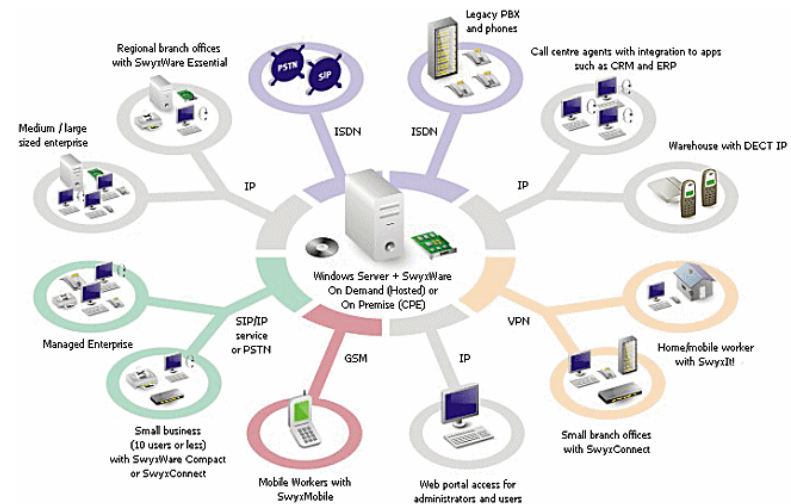


# Unified Communication



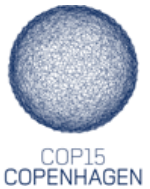
- **“People centric” – Adjustable to user’s way of working**
  - High flexibility (call routing/redirection based on your calendar entries, policy, rule, etc.)
    - User can redirect or filter some calls and not others!
- **Find Me Follow Me (FMFM) functionality - (not tied to device or sim card)**
  - Location independent or even user independent! (offshore consultants, home computing, etc.)
    - Same way to call, same way to receive whether at Conference site, home or on the road
  - Office provides infrastructure, users use their preferred services
- **Distributed management/administration**
  - Administration “location independent”
  - Accessible from any location through intranet

- **Who needs it?**
  - Travelers / delegates
  - Sales people
  - HQ – Regional offices
  - Callcenter
  - Service
  - Financial
  - Production
  - Global Enterprise



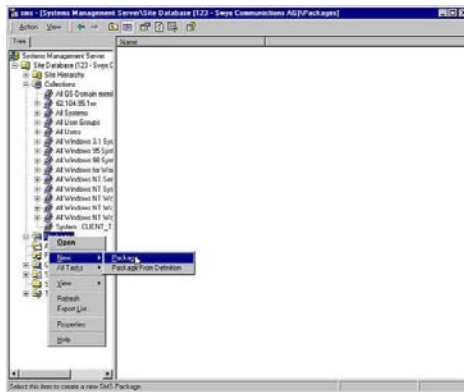


# Management and administration



Message	Name	Extension Number	Public Number	Location	Voicemail Profile	Call Forward	Logon Time	SIP User ID
	administrator	105		DefaultLocation	Standard	No call restrictions	No	
	ts	100	+4923197202...	DefaultLocation	Standard	No call restrictions	No	10/10/2007 10:56:13 AM
	ts2	120		DefaultLocation	Standard	No call restrictions	No	
	ts-mobile	200		DefaultLocation	Standard	No call restrictions	No	
	Conference			DefaultLocation	Plan	Copy all calls	No	10/10/2007 10:54:03 AM
	tsd	406		DefaultLocation	Standard	No call restrictions	No	tsd
	MobileExtensionManager	999	+4923197200...	DefaultLocation	Standard	No call restrictions	No	10/10/2007 10:56:13 AM
	Operator			DefaultLocation	Standard	Internal destinations	No	
	SIP	106		DefaultLocation	Standard	No call restrictions	No	SIP
	SanyFax	300		DefaultLocation	Standard	No call restrictions	No	10/10/2007 10:54:13 AM
	ts1	101		DefaultLocation	Standard	No call restrictions	No	
	ts2	102		DefaultLocation	Standard	No call restrictions	No	
	LD	104		DefaultLocation	Standard	No call restrictions	No	
	Wolfgang Bröder	103		DefaultLocation	Standard	No call restrictions	No	

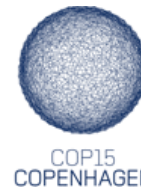
- *Web based administration*
- *Microsoft AD integration*
- *Full logging and statistics*
- *Tracking capabilities*
- *High availability (SIP/PRI/GSM)*
- *Redundancy (Master / Standby)*



- *ROI / TCO*
  - *Standard server platform*
  - *Use existing competence and know-how*
  - *Fast deployment*
  - *Standard MS platform*
  - *Least Cost Routing*
  - *Intuitive user and management interface*



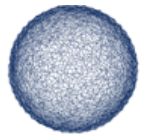
## *Principal setup and functionality*



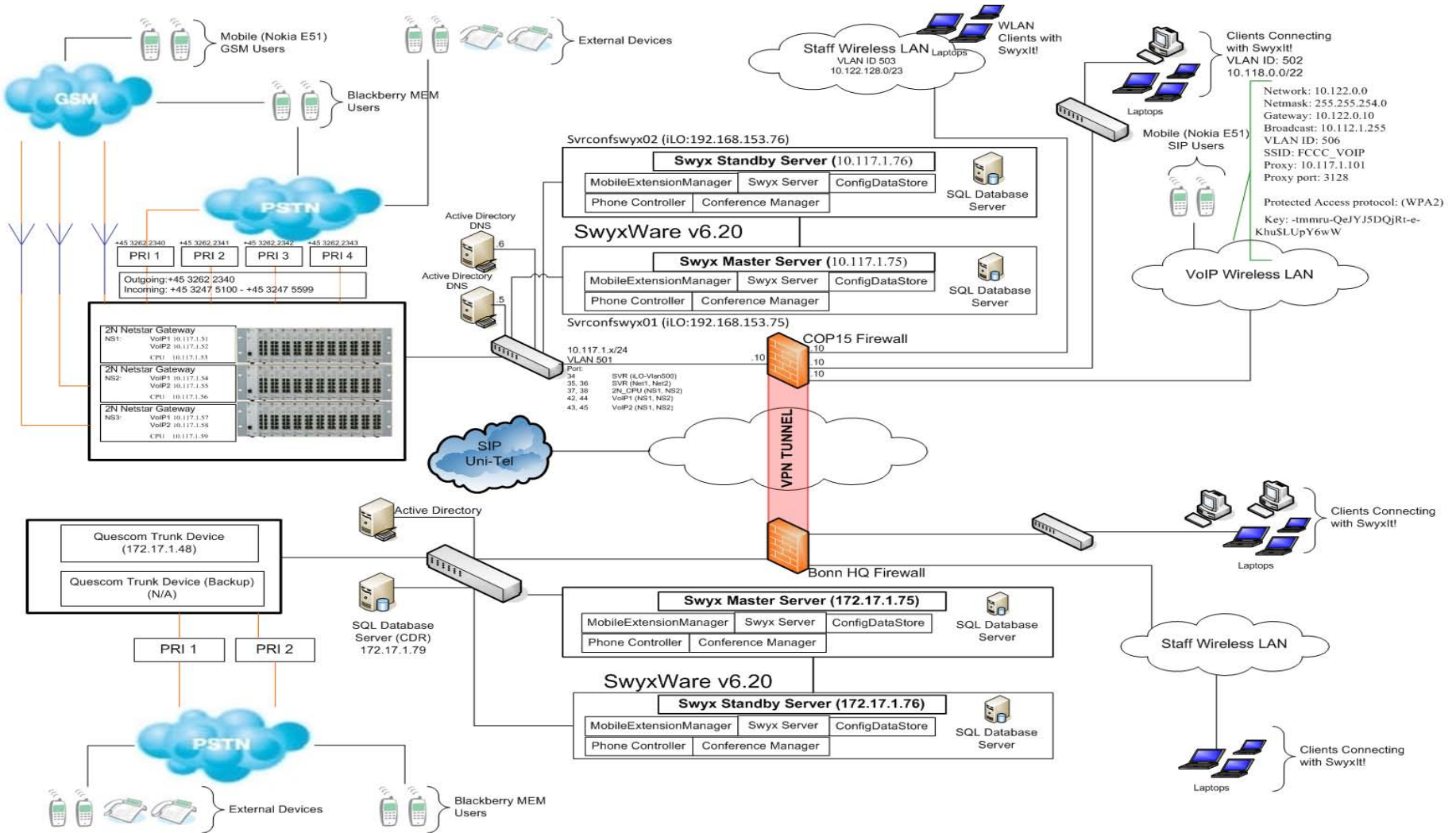
- The solution is based on a Windows server 64 bit platform with one master and one standby server for redundancy*
- The servers has Microsoft SQL2005 installed for the setup and configuration database*
- All calls to foreign countries are made through a SIP provider for least cost routing*
- All calls outside the premises on the ISDN and GSM lines for domestic calls, are handled by 3 boxes of 2N NetStar gateways with 2xISDN PRI and 16xGSM ports on each. The load is dynamicaly deployed and balanced through all boxes with 1/3 extra capacity in case of failure on one box*
- CTI Telephones are connected to the network, together with PC's running SwyxIT softphone, conference phones and mobile phones running SwyxIT. Mobile phones uses WiFi or GSM as connection to the Swyx servers*
- For statistics a special application is installed, witch decifer the CDR call database, and present data out of specifications made by UN*



# Infrastructure

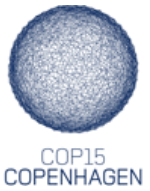


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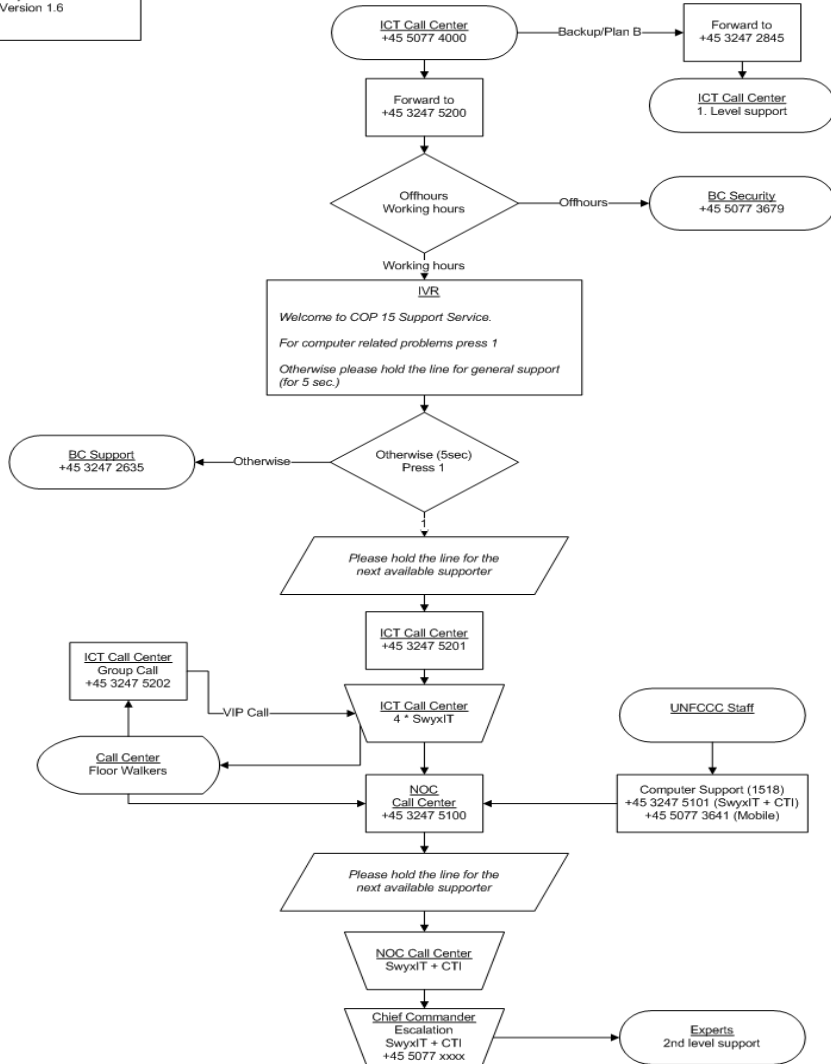




# Callflow



Swyx Call Flow chart  
Version 1.6



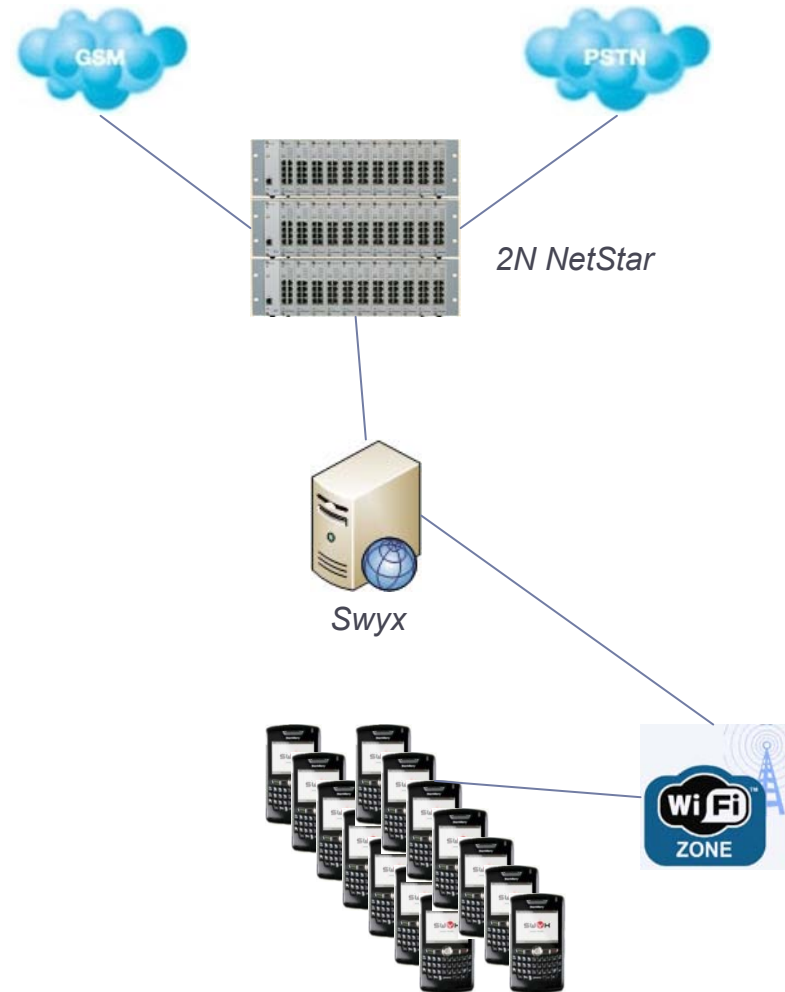
The callflow is making sure that every call has the shortest route through the system



# WIFI / GSM

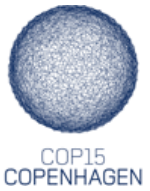
## Call through Wi-Fi at BellaCenter

- *The mobile user places a call from mobile phone via Wi-Fi*
- *Swyx selects optimized route for call*
  - *ISDN, GSM or SIP*
- *All calls are monitored and visible in callcenter, soft phones and presents all statistics*





# WIFI / GSM



## SwyxMobile

*Client Application/-Software*

### **SwyxIt! Mobile:**

- Available for mobile phones using Symbian, Windows Mobile and Blackberry operation systems
- Uses link to Swyx MobileExtensionManager (MEM) via GSM or SIP/WLAN (Dual-Mode)
- Enables telephony comfort functionality during a conversation like call transfer, call swap, conference, call on hold, recording
- Configures Call Forwarding
- Supports "One-number concept: Calls are signaling the office number
- Transfer of a conversation via mobile phone to the office phone
- Usage of SwyxWare user rights
- Easy analysis of telephony costs

*Web Application/-Service*

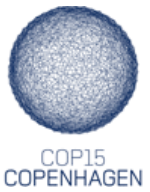
### **Swyx Contact Center:**

- Available for Apple iPhone
- Uses data connection (GPRS/UMTS) to the application server
- Offers global phonebook including presence information
- Shows lists of the office environment like dialed numbers, caller list
- Enables dialing from phonebook or lists (calls will not be routed via MEM)





# Statistics



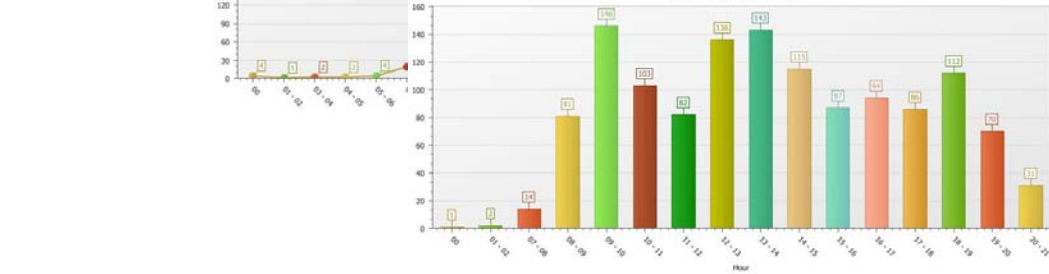
All Calls



All Incoming Calls

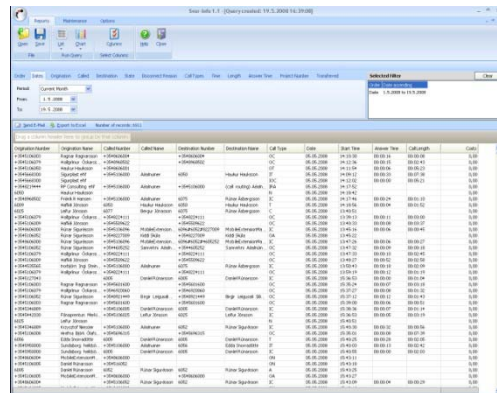
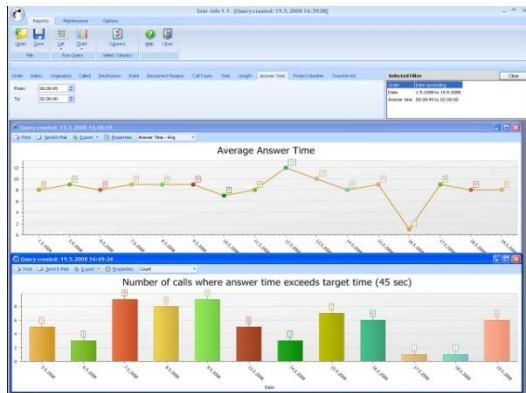


All Outgoing Calls



*All calls going through Swyx is consolidated and presented in an easy form with Svar Info*

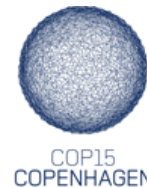
- *Every day the statistics are sent to UN*
- *Statistics can be scheduled to be sent by e-mail and/or to print*
- *All calls are monitored and visible in callcenter, softphones and presents all statistics*





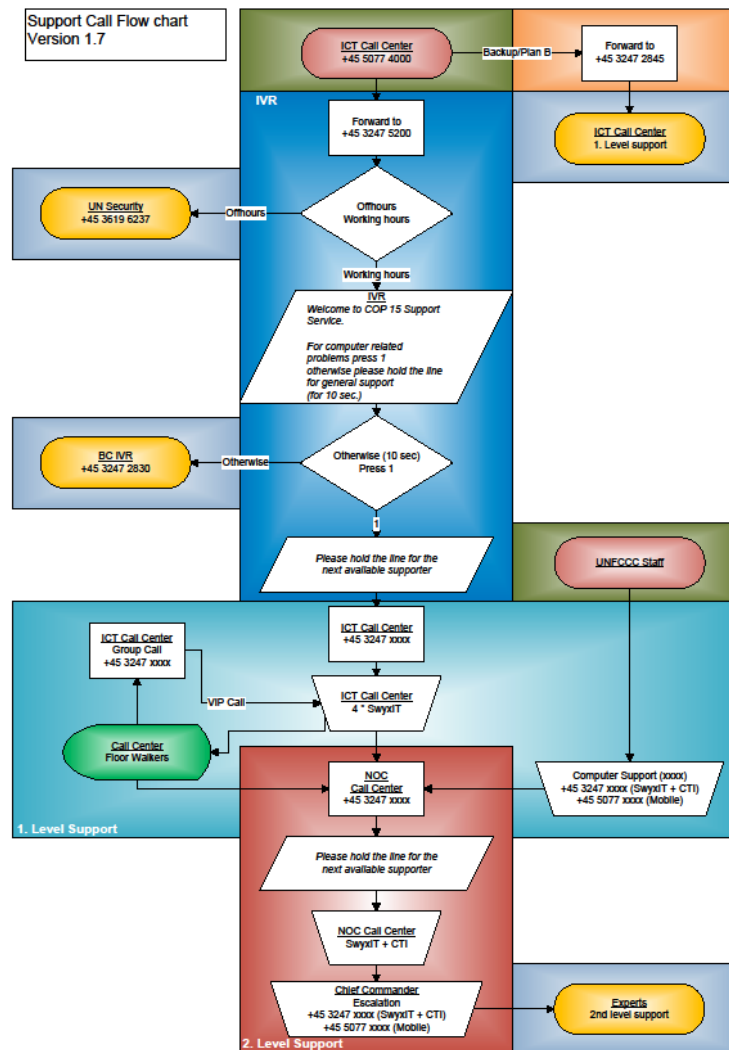


# Support roadmap



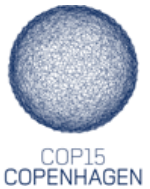
## Supportplan:

9. to 13. nov	08.30 - 16.30	Tom
16. to 20. nov	08.30 - 16.30	Dennis
23. to 27. nov	08.30 - 16.30	Tom
30. nov to 4. dec	07.00 - 15.00	Lasse
	14.30 - 22.00	Dennis
7. dec to 11. dec	07.00 - 15.00	Dennis
	14.30 - 22.00	Otto
14. dec to 19. dec	07.00 - 15.30	Lasse
	15.00 - 23.30	Dennis
	23.00 - 07.30	Tom

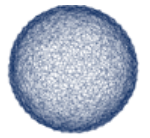




# Terminology



- 
- “IP” stands for “*internet protocol*”
    - *The vehicles on the information highway*
    - *Until a couple of years ago, traffic included data (files, emails, ...), pictures, music, video, etc.*
  - “VoIP” is Voice Over “IP”
    - *Voice as part of the information traffic*
  - *Unified communication (UC) is the convergence of different types of communications: voice, email, faxes, instant messages and videoconferencing — into one common pervasive interface and/or repository.*
  - *Convergence is the combination of technologies into a single solution.*
  - *ISDN - Integrated Services Digital Network*
    - *the traditional type of telephone line to a telecom provider*
  - *GSM – Global System for Mobile communications - The communication method for mobile phones*
  - *SIP – Session Initiation Protocol – Is a signaling protocol used for controlling multimedia communications, such as voice and video*
  - *CTI – Computer Telephony Integration – Allows interaction between the softphone and the telephone*



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*Questions ?*