



# 2N<sup>®</sup> NetSpeaker





# 2N<sup>®</sup> NetSpeaker

## Main features



- Flexibility
- Streaming both in local network and internet
- Unlimited number of both sources and incomers of stream in the system
- Division of the speakers into independently controlled groups
- Possibility to setup an independent operating
- Audio playback from a file or an external source
- Audio streams mixing - playlist creation support



## 2N<sup>®</sup> NetSpeaker Target groups



- Schools
- Hospitals
- Public authorities
- Office buildings
- Manufacturing halls
- Military areas
- Shopping centres
- Stores
- Railway and bus stations
- Airports
- Hotels



## 2N<sup>®</sup> NetSpeaker Benefits for users

Operator's point of view:

- Costs saving in relation to other broadcast systems
- Simple installation
- Low maintenance
- High reliability
- Intuitive operation of the system

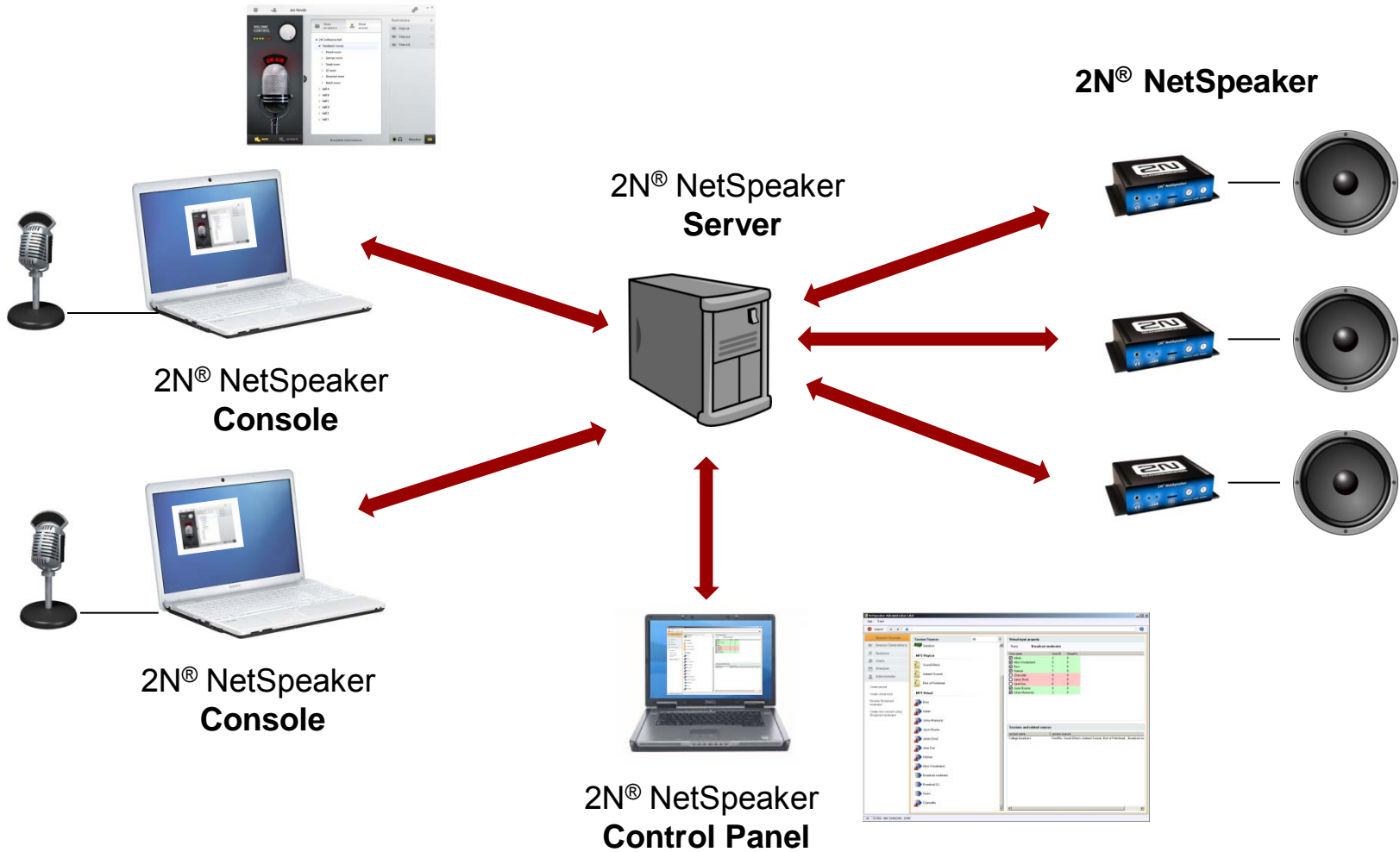


Listeners' point of view:

- High audio quality
- Stream made to measure to listeners need



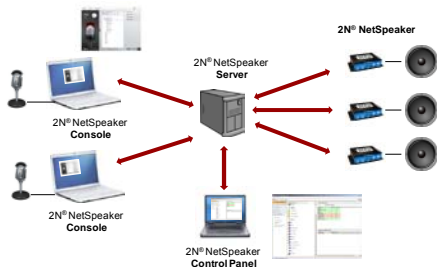
# 2N<sup>®</sup> NetSpeaker System schema





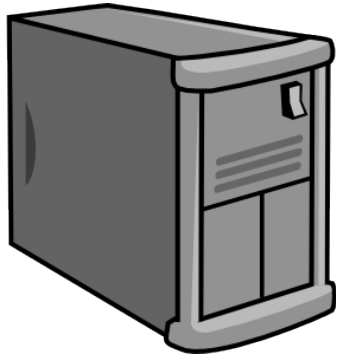
# 2N<sup>®</sup> NetSpeaker System components

- PC with application Server  
as a brain of the whole system
- The application Console  
for an ordinary user
- The application Control  
Panel  
for system settings and control
- 2N<sup>®</sup> NetSpeaker(s)  
as endpoint devices





## 2N<sup>®</sup> NetSpeaker Server



- Audio stream incoming and receiving
- The database with the system settings
- Time features – events planning



# 2N<sup>®</sup> NetSpeaker Control Panel

The screenshot displays the NetSpeaker Administrator 1.0.0 interface. The main window is titled "NetSpeaker Administrator 1.0.0" and contains several panes:

- Session Sources:** A list of session sources including "MP3 Playlist" (with sub-items like Sound Effects, Ambient Sounds, Best of Portishead), "MP3 Virtual" (with sub-items like Boss, Admin, Johnny Mnemonic, Jason Bourne, James Bond, Jane Doe, Hatman, Alice Wonderland, Broadcast moderator, Broadcast DJ, Guest, Chancellor), and "Speakers".
- Virtual input property:** A table showing user details for a "Broadcast moderator".
- Sessions and related sources:** A table showing session names and their associated sources.
- Destinations & Groups:** A tree view showing a hierarchy of destinations including "All destinations", "rooms", "Lecture halls", and "Conference rooms".

The "Virtual input property" table is as follows:

Broadcast moderator		
User name	User ID	Virtual Id
<input checked="" type="checkbox"/> Admin	2	9
<input checked="" type="checkbox"/> Alice Wonderland	8	9
<input checked="" type="checkbox"/> Boss	1	9
<input checked="" type="checkbox"/> Hatman	7	9
<input type="checkbox"/> Chancellor	9	9
<input type="checkbox"/> James Bond	5	9
<input type="checkbox"/> Jane Doe	6	9
<input checked="" type="checkbox"/> Jason Bourne	4	9
<input checked="" type="checkbox"/> Johnny Mnemonic	3	9

The "Sessions and related sources" table is as follows:

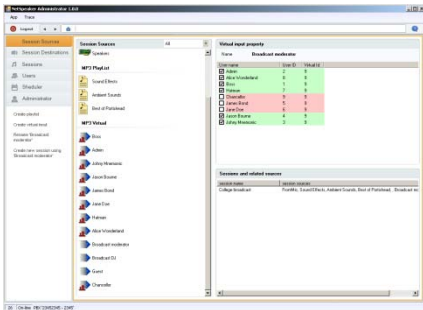
session name	session sources
College broadcast	FrontMic, Sound Effects, Ambient Sounds, Best of Portishead, , Broadcast mc

The "Destinations & Groups" tree view shows a hierarchy of destinations including "All destinations", "rooms", "Lecture halls", and "Conference rooms".





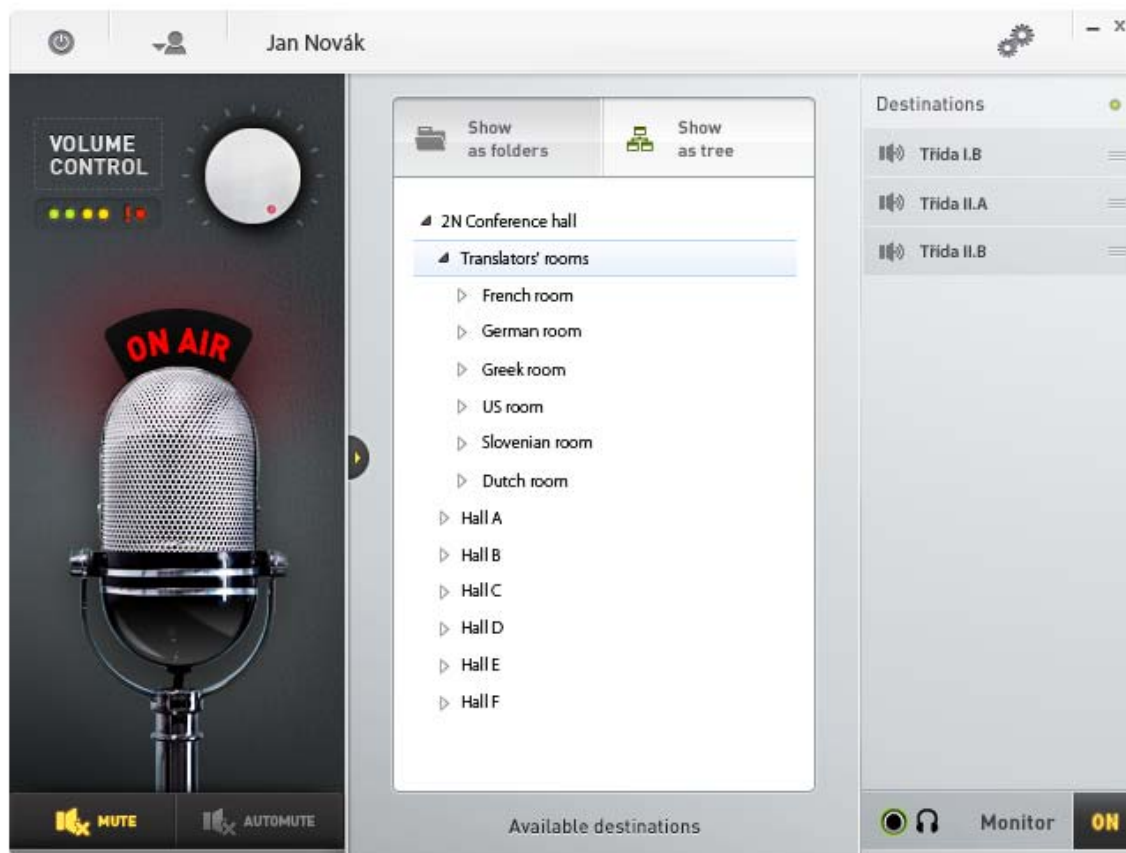
# 2N<sup>®</sup> NetSpeaker Control Panel



- The system configuration
- 2N<sup>®</sup> NetSpeakers settings
- The zones creating
- Audio inputs administration
- Audio relations creating
- Events planning
- Users management



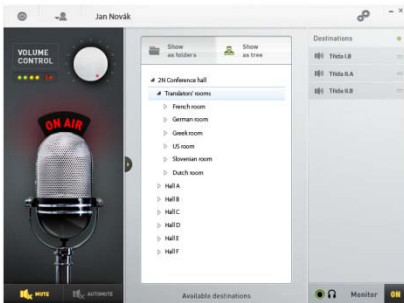
# 2N<sup>®</sup> NetSpeaker Console





# 2N<sup>®</sup> NetSpeaker Console

- Simple control
- Choice of target devices
- Broadcast from local inputs of PC
- Broadcast of prepared audio files
- Overhear of broadcasting stream





# 2N<sup>®</sup> NetSpeaker Hardware





## 2N<sup>®</sup> NetSpeaker External interface

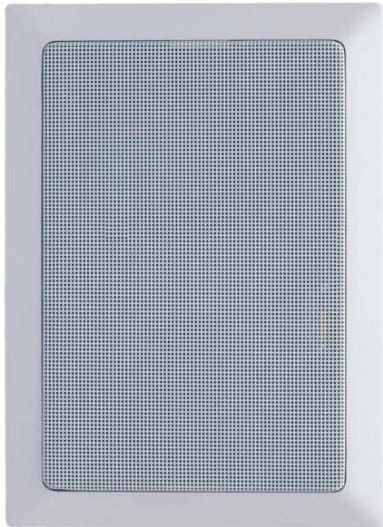


- POE or 12V power
- 10/100Base-TX Ethernet
- The output of the amplifier
- The output of Line out/Headphones
- 2 user buttons
- The sensor for remote control
- The slot for Micro SD card
- 1x digital input and output



2N<sup>®</sup> NetSpeaker

## The parameters of amplifiers



- Stereo/Mono Loudspeaker (4-16Ω)
- 2x 4W (1x **8W**) s **POE**
- 2x 7W (1x **14W**) s **12V/2A** power



## 2N<sup>®</sup> NetSpeaker Audio stream

- **MPEG-1 Layer III**  
(32-320kbit)



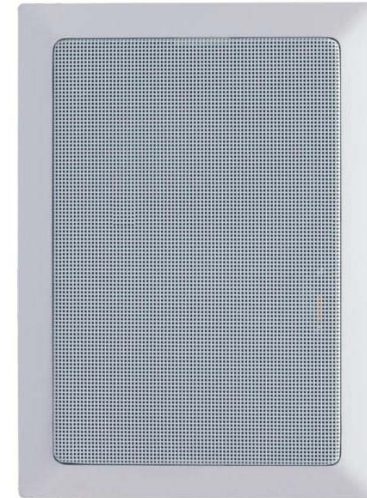
- **Unicast audio**  
(in LAN or Internet)
- **Multicast audio**  
(only in LAN)



# 2N<sup>®</sup> NetSpeaker Hardware options



Standalone unit  
without any  
loudspeaker  
(simple box to which you  
can connect any speakers)



Lower  
ceiling/bottom  
view  
(with already built in  
speaker)





## Monting boxes



**Flusch mounting box**



**On wall mounting box**



## Case studies



- Retail
- Transportation
- Education
- Hospitality /Entertainment
- Broadcast / Audio on demand



## Retail

### **Customer:**

a fashion company operating on several continents around the world selling young fashion, shoes, fragrances and accessories



### **Need:**

- to reinforce its brand and support promotional campaigns, PR and information at the POS by unified in-store radio broadcasting
- to provide in-store radio from headquarters throughout all stores
- to use current IP connection in stores



## Retail

### **Solution:**

The company decided for 2N<sup>®</sup> NetSpeaker as it is:



- a network-based audio distribution system streamed via existing Ethernet networks (Ethernet -> LAN)
- centrally managed and remotely controlled via intuitive software
- easy to use and monitor
- a reliable solution delivering high quality audio
- a marketing tool for centrally managed marketing campaigns in particular stores



## Retail

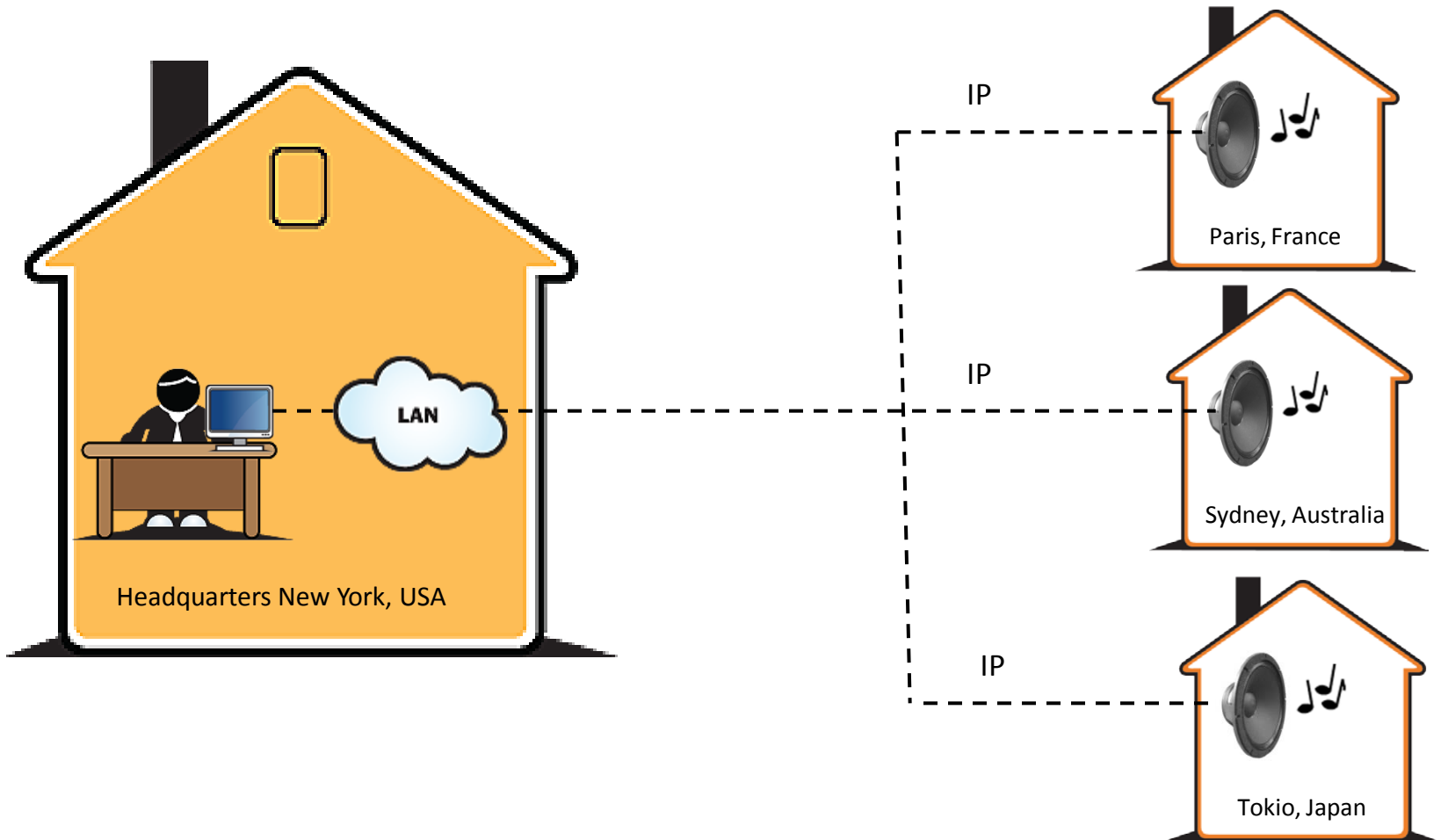
### Benefits:

- saving costs - no monthly fees
- increased brand awareness
- boosted sales through targeted advertising at the point of sale
- low maintenance for every store
- almost no implementing requirements - using existing ethernet connection and plug and play connection





# Retail - scheme





# Transportation

## Customer:

a railway company that operates 7654 rail connections per day and manage more than 2500 railway stations in one country



## Need:

- to improve the quality of live and recorded announcements at the railway stations and stopping points
- to reduce the cost of this broadcast (to replace its ISDN operational telecommunication network with a digital IP-based network)
- to make information providing more easier and flexible



# Transportation

## Solution:



- the live spoken announcements or stored on central servers are sent to one of the central control centers to which the railway stations are assigned on a regional basis
- 2N® NetSpeaker encodes the audio and control signals and streams them at the appropriate station platform
- audio signal is converted into voice and relayed to the loudspeakers





# Transportation

## Benefits

- simplification of communication and networking
- easy use
- flexibility of information providing
- costs saving
- possibility to broadcast background music in order to make a pleasant atmosphere at the railway stations and stopping points

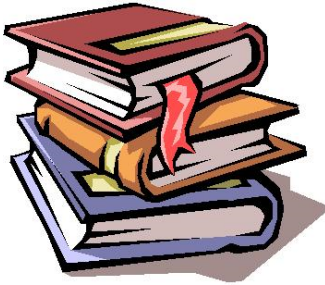




# Education

## Customer

a university that has approximately 5000 students and operating in 2 buildings and 7 campuses



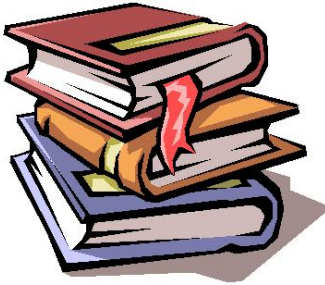
## Need

- the university was seeking an audio and notification system
- capability of distributing scheduled events, including bells and announcements to ten distinct zones



# Education

## Solution



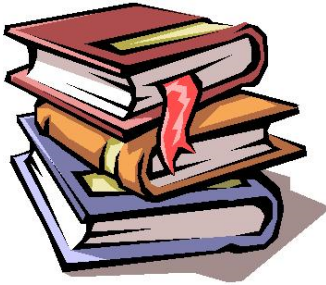
- 2N<sup>®</sup> NetSpeaker was chosen as a multi-zone voice and audio scheduling system using shared IP network
- a static schedule most days was set up via audio scheduling system with the possibility of flexible changes – change of day schedules or special events
- possibility of a flexible live announcement by the principal or the secretary
- possibility of a safety instructions providing



# Education

## Benefits

- high quality audio stream
- increased safety and organization in emergency actions by a range of customised alarm signals and live commands
- higher level of students' awareness about school actions, programme and schedules





# School



## Classrooms



Classroom 1

2N® NetSpeaker

Message A



Classroom 2

2N® NetSpeaker

Background music



Classroom 3

2N® NetSpeaker

Message B



Headmaster



Server room



Staffroom



# Hospitality/entertainment

## Customer

a five-star hotel operating more than 185 hotels in 15 countries and 505 travel agencies in 23 countries



## Need

- to provide an individualized radio channel in public zones - lounge, bar, reception, spa, gym and swimming pool
- to support the special feeling of the unique hotel environment
- low maintenance solution
- reasonable costs



# Hospitality/entertainment

## Solution

2N<sup>®</sup> NetSpeaker was chosen as:

- an audio over IP
- a solution which is simply to use and manage, easy maintenance
- a solution that offers high level of flexibility
- a very reliable solution





# Hospitality/entertainment

## Benefits



- high quality audio broadcast managed from the central point
- no construction interventions
- easy maintenance solution
- support of the unique hotel atmosphere
- increased safety – possible use in emergency actions
- possibility to offer new range of services to customers



# Hotel





# Questions?