
TOMMEX
dźwięk to my!

General characteristics

TOMMEX company carries on designing and commercial activity. Import and sales of professional electro acoustic equipment, designing of electro acoustics systems, equipment completion, starting up and maintaining equipment, technical advisory, warranty and repair service.

We are leaders on Polish market in areas of sound reinforcement, public address and communications systems. For designing purposes we are using specially designed software (WS CAD, AutoCAD, EASE 3.0). Each advanced project is preceded with computer simulation. Our staff is fully trained by our equipment suppliers. Our principle is to be professional, reliable and upright. In 2007 we inculcated quality management system, complying with ISO 9001:2000, certified by Decra. We are realizing principle of „from design to start up".

All these allows us to solve all problems concerning sound reinforcing in any object quickly, reliably and efficiently and be up to any challenge.

We are proud of, among all others, these successes:

1. ***Passenger Terminal and Multilevel Parking at Okęcie Airport – public address systems***,
2. ***National and „Syrena" Theatres – sound reinforcement systems + recording studio***,
3. ***Five Underground stations in Warsaw (Centrum, Świętokrzyska, Wilanowska, Politechnika, Ratusz)***,
4. ***People's Hall in Wrocław and Great Hall of Warsaw's University of Techniques***,
5. ***Complex sound reinforcement of many hotels, including conference equipment (e.g. Panorama II Wrocław) – high power systems***,
6. ***Sound reinforcement of Pope's visit in Tbilisi, Georgia***
7. ***Arkadia Shopping Centre – emergency evacuation public system***

TOMMEX is a collective member of Audio Engineering Society – American organisation associating electro acoustic specialists and most renowned companies working in this field. As a collective member of AES our company is registered in New York since 1996 and our name is published on AES Journal cover and on www.aes.org pages.

TOMMEX is registered by Security Development Institution („Techom") as an authorized alarm installations company in sphere of designing and installations of alarm systems in SA 2 Class.

TOMMEX is currently a partnership of J. Tomasz Żebrowski and Dorota Kamińska, company is cooperating with second J.T. Żebrowski's company DYNACORD-SERVICE (repairing service, installation works), which is operating since 1977. Both companies employ together 14 permanent employees and about 5 people as constant collaborators. In case of realization of big projects we cooperate with big companies like ABB Instal Wrocław, PIA Piasecki Kielce.

Emergency evacuation public address systems

One of most important fields of our operation is realization of informational and emergency public address systems based on equipment from Swiss company, G+M. As exclusive commercial representative of G+M in Poland we have following range of activity:

- project consultations for designers elaborating technical documentation based on G+M appliances,
- own elaborations on design documentation of systems,
- deliveries of equipment and complete sound reinforcement systems,
- starting these systems, employees training, user manuals etc.,
- we grant 3 year of factory warranty and we carry on warranty and post-warranty service for these appliances and systems, for 20 years already.

We specialize in deliveries of appliances for 100V public address systems, intended for sound reinforcement of:

- hotels and office buildings,
- trade centres and car parks,
- railway stations and airports,
- halls and other sport facilities.

These systems may work independently or in full cooperation with life safety and/or security systems, and can be equipped with:

- own emergency power supply form rechargeable 24V batteries,
- power amplifiers monitoring systems with automatic switching for emergency ones,
- loudspeaker output lines monitoring systems and individual monitoring of single loudspeakers.

Scenic sound reinforcement systems

For sound reinforcement of scenic shows we offer systems based on appliances of renowned companies like Dynacord, Midas, Klark Teknik and Outboard. Wide assortment of offered equipment allows optimal configuration of systems for different uses:

- stationary and portable systems for music bands and sound reinforcement companies,
- sound reinforcement of small club halls, e.g. for jazz or cabaret events,
- sound reinforcement of average multifunctional, concert and other halls,
- sound reinforcement of big concerts, also rock concerts, in - and outdoors,
- disco sound reinforcement of leisure halls,
- big events.

Sound reinforcement of conference rooms

For equipping of conference rooms we offer following sound systems:

- general sound reinforcement for voice and background music trasmittion,
- sound reinforcement for screen projection using video signal projectors,
- systems using wireless microphones,
- conference discussion systems with individual delegate units, also with possibility of voting and/or operating using computer (delegate database, reports printout etc.),
- wired, infrared and radio multilingual simultaneous language interpretation systems.

TOMMEX is commercial representative in Poland of following global producers of professional electro acoustic equipment and accessories:

DYNACORD (Germany) – professional informational and emergency public address systems and also sound reinforcement equipment for scenes, concerts and discos.
KLARK TEKNIK (England) - highest class sound processors.
MIDAS and **DDA** (England) – professional phonic mixers.
DNH A/S (Norway) – professional loudspeakers for different applications, for industrial installations, ferries, oil platforms.
OUTOBOARD (England) – producer of the unique effects matrix – TiMax. For big events and theatres.
TLS (Germany) – presentation and didactic computer multimedia systems.
SQN (England) – portable battery-powered mixers for film and reporter applications.
RYCOTE (England) – windshields and suspension microphone clamps.

G+M (Swiss) – professional informational and emergency public address systems
VDB (France) – professional microphone booms with accessories.

Appliances of these companies are under authorized warranty and post warranty service. They may be presented at our trade office, at annual „Intermedia" and „Intelligent building" Wrocław exhibitions, and also on specialist symposiums. We are also carrying on trainings concerning equipment of special use.
Realized systems are provided mainly in appliances imported directly by us, thanks to what we obtain competitive level of overall costs. Systems completion is based only on equipment of highest quality and reliability – on principle we do not use cheap equipment of lower quality.

Our Clients

GOVERNMENT BUILDINGS

Polish President's Press Office	***Warszawa***	Sound reinforcement system
Constitutional Tribunal	***Warszawa***	Conference system
European Center EC, Natolin	***Warszawa***	Wireless system
Provincial Police Headquarters	***Wrocław***	Conference room sound reinforcement system
State Insurance Supervision Office	***Warszawa***	Conference room sound reinforcement system
Ministry of Environment Protection	***Warszawa***	Conference room sound reinforcement system
Ministry of Treasure's House of Creative Work	***Serock***	Sound reinforcement system
Main Mining Institute	***Katowice***	Multichannel conference system
Social Insurance Institution I Section. Senatorska str.	***Warszawa***	Conference room sound reinforcement system
"ECO FOUND"	***Warszawa***	Conference room sound reinforcement system

BANKS

Polish National Bank Central Office , Siedmiogrodzka str.	***Warszawa***	Public Adress System
Training Centre of Polish National Bank	***Zalesie k/W-y***	Public Adress System
PKO S.A. Bank, Blue Scyscraper	***Warszawa***	Public Adress System
PKO S.A. Bank, Czackiego str.	***Warszawa***	Public Adress System
BRE Bank Central, Pl. Teatralny	***Warszawa***	Public Adress System
NBP "Stara Wieś"	***Stara Wieś***	Public Adress System

RAILWAY STATIONS AND AIR TERMINALS

Okęcie Passenger Terminal	***Warszawa***	Public Adress System
Okęcie Multilevel parking	***Warszawa***	Public Adress System
Warsaw's Metro "WILANOWSKA" Station	***Warszawa***	Public Adress System
Warsaw's Metro "POLITECHNIKA" Station	***Warszawa***	Public Adress System
Warsaw's Metro "CENTRUM" Station	***Warszawa***	Public Adress System
Warsaw's Metro "ŚWIETOKRZYSKA" Station	***Warszawa***	Public Adress System
Warsaw's Metro "RATUSZ" Station	***Warszawa***	Public Adress System

THEATRES, CULTURE HOUSES, DIDACTIC ROOMS

National Theatre	***Warszawa***	Sound reinforcement system, talkback network and 12 Ch UHF wireless system
Ołowianka Island over Motława river - Philharmonic Orchester	***Gdańsk***	Sound reinforcement system
Theatre „Syrena"	***Warszawa***	Sound reinforcement system, talkback network and 12 Ch UHF wireless system

Culture House Pomeranian Princes Castle	***Szczecin***	PFE Sound reinforcement system
Theatre „Mały”	***Warszawa***	Sound reinforcement system
Theatre „Polski”	***Warszawa***	Sound reinforcement system
Theatre „Ateneum”	***Warszawa***	Sound reinforcement system
Theatre „Nowy”	***Poznań***	Sound reinforcement system
Theatre „im. Witkacego”	***Zakopane***	Sound reinforcement system
Culture House	***Suwałki***	PFE Sound reinforcement system
Culture House	***Kozienice***	Sound reinforcement system
Didactic Halls of Warsaw University of Technics, Electronics Faculty	***Warszawa***	Sound reinforcement system
Hall of Warsaw University of Technics, Thermal Technics Institute	***Warszawa***	Sound reinforcement system
Didactic Halls of Medical Academy	***Warszawa***	Sound reinforcement system
Culture House	***Siedlce***	SRC Sound reinforcement system

HOTELS, DISCOS; MULTIMEDIA SYSTEMS

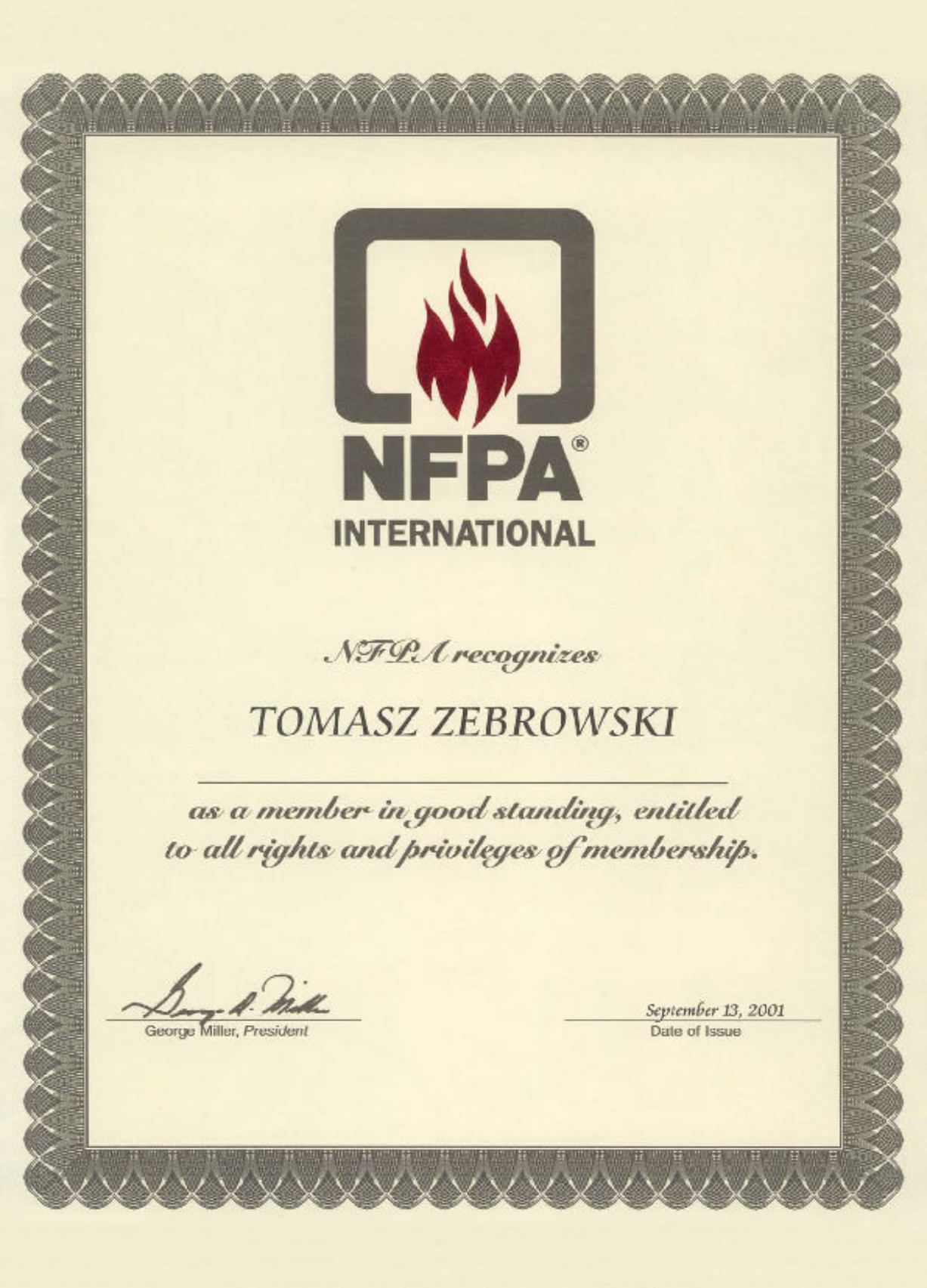
Panorama Hotel	***Wrocław***	Public Adress System, conference and multimedia system
Grand Hotel’s Olimpics Club	***Warszawa***	Public Adress System, conference and multimedia system
Victoria Intercontinental Hotel	***Warszawa***	Public Adress System
Park Plaza Hotel	***Olsztyn***	Public Adress System
Novotel Hotel	***Warszawa***	Public Adress System
Grand Hotel	***Warszawa***	Public Adress System
Mariott Hotel	***Warszawa***	Power amplifier set
Bełchatów Hotel	***Bełchatów***	Public Adress System
Bristol Hotel Disco	***Warszawa***	Sound reinforcement system
„Mrągowia” Hotel Disco	***Mrągowo***	Sound reinforcement system
“New York” Disco	***Katowice***	Sound reinforcement system
"Fontanna" Disco, ul. Kredytowa	***Warszawa***	Sound reinforcement system
“Europejski” Hotel Royal Casino	***Warszawa***	Sound reinforcement system

VERY LARGE HALL

„COMUNITY HALL“	***Wrocław***	Sound reinforcement system
Figure Skating Contest „Uniwersjada '93”	***Tarnów***	Ice rink sound reinforcement
Avenue „Najświętszej Marii Panny” Pope’s visit	***Częstochowa***	Sound reinforcement system
Pope’s visit in Georgia 2000'	***Tbilisi***	Very high power sound reinforcement system
Great Hall of Warsaw University of Technics	***Warszawa***	Sound reinforcement system
Field Cathedral of Polish Army	***Warszawa***	Sound reinforcement system
Sports and Leisure Hall OsiR	***Zabrze***	Sound reinforcement system
Fransiscan Monastery	***Warszawa***	Sound reinforcmenet and interpretations system
Sports and Leisure Hall „Spodek”	***Katowice***	System without loudspeaker sets
Royal Castle’s Concert Hall	***Warszawa***	Loudspeaker system

Parish church	***Bobrówka***	Sound reinforcement system
OFFICE CENTERS		
"Mannheimer Hamburger" Office Center	***Warszawa***	Public Adress System
Polish Telecommunication Centre., Barbary str.	***Warszawa***	Power amplifier set
Central Power Dispatcher's Office	***Warszawa***	Public Adress System
ISUZU Engines Industry	***Tychy***	Public Adress System
Energy Institute „Częstochowa"	***Częstochowa***	Public Adress System
PowerStation „Łaziska" (office bldg.)	***Łaziska***	Public Adress System
Daewoo-FSO	***Warszawa***	Conference room sound reinforcement system
Elektrim, ul. Pańska	***Warszawa***	Conference room sound reinforcement system
Opel Poland	***Gliwice***	FSE Wireless system
FSO Żerań Company Parlour	***Warszawa***	Public Adress System
"ERA" Parlour, ul. Puławska	***Warszawa***	Public Adress System
"Excelent" Parlour	***Warszawa***	Public Adress System
Energopol, Al. Jerozolimskie	***Warszawa***	Public Adress System
Geology Museum	***Warszawa***	Public Adress System
"Ogrodowa" Office Center	***Warszawa***	Public Adress System
"INTRACO" Office Center	***Warszawa***	Public Adress System
BIG SHOPING CENTER		
Trading Hall IKEA	***Janki k/W-wy***	Public Adress System
Trading Hall IKEA	***Poznań***	Public Adress System
Mega store „SMYK"	***Warszawa***	Public Adress System
Fashion Parlour ADLER	***Warszawa***	Public Adress System
Fashion Parlour ADLER	***Kielce***	Public Adress System
Fashion Parlour ADLER	***Łódż***	Public Adress System
Fashion Parlour ADLER	***Olsztyn***	Public Adress System
Fashion Parlour ADLER	***Szczecin***	Public Adress System
Trading Hall DEIHMAN	***Szczecin***	Public Adress System
Mega store "RAINBOW CENTER"	***Warszawa***	Public Adress System
SPECIAL INSTALATIONS		
Radio "ZET"	***Warszawa***	Satellite transmission van
School for children with hearing impaired	***Radom***	FSE Wireless system for weak hearing
SAP POLAND	***Warszawa***	TLS software didactic unit R-3/SAP
KGiHM	***Lubiń***	TLS software didactic unit R-3/SAP
Polish State TV, Warszawa	***Warszawa***	Sound reinforcement system
Polish State TV, Wrocław	***Wrocław***	12 ch. UHF wireless system
Polish State TV, Warszawa	***Warszawa***	12 ch. UHF wireless system

Important certificates and references



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NFPA recognizes

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as a member in good standing, entitled to all rights and privileges of membership.

George Miller, *President*

September 13, 2001
Date of Issue

Founded for the Advancement of Audio Engineering

AUDIO ENGINEERING SOCIETY

This is to certify that

Tommex

has been enrolled a

SUSTAINING MEMBER

of the Audio Engineering Society, New York, N.Y., U.S.A.

May 1995
Date

Secretary

President

POLSKI KOMITET OLIMPIJSKI

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Warszawa, 7.09.1999 r.

L. dz. **OA-2308/99**

TOMEX S.C.

Warszawa, Chmielna 126

Mam przyjemność powiadomić o przyznanym Państwa Firmie wyróżnieniu przez Kapitułę ds. Odznaczeń Polskiego Komitetu Olimpijskiego.

Serdecznie zapraszam przedstawiciela Państwa Firmy na posiedzenie Zarządu Polskiego Komitetu Olimpijskiego 13 września 1999 r. godz. 11,00, podczas którego zostanie wręczone wyróżnienie.
Posiedzenie Zarządu PKOl. odbędzie się w KLUBIE OLIMPIJSKIM w hotelu „GRAND" w Warszawie, ul. Krucza 28.

Z poważaniem

Sekretarz Generalny
Janusz Tatera

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Warszawa, dnia 2001-01-11

REFERENCJE

Firma TOMMEX wykonywała następujące prace na obiektach metra:

- opracowanie symulacji komputerowej systemu nagłośnienia dla stacji A13, A14, A15
- zrealizowanie projektu
- dostarczenie specjalistycznych urządzeń
- uruchomienie systemu nagłośnienia

Wszystkie prace firma wykonała solidnie i terminowo.

Jakość oraz estetyka wykonania odpowiada współczesnym normom. Zaprojektowany i zainstalowany system zapewnia wymagane parametry dla tego typu obiektów.

Sprawne rozwiązanie problemów technicznych w niekorzystnych warunkach akustycznych oraz elastyczność działania budzi zaufanie i stawia wysoką ocenę firmie.

Z-CA DYREKTORA
inż. Adam Sapijaszko

FIRMA NA MEDAL

EDYCJA VII, październik 2006

patronat nad konkursem
Polski Komitet Olimpijski

TOMMEX Żebrowscy Sp.j.
i Pan JAN ŻEBROWSKI
Właściciel

otrzymują wyróżnienie FIRMA NA MEDAL w kategorii

WYKONAWCA ROBÓT SPECJALISTYCZNYCH
w obiektach sportowych i rekreacyjnych

za systemy nagłośnieniowe do obiektów sportowych i rekreacyjnych oraz
za całokształt działalności na rzecz rozwoju budownictwa sportowego i rekreacyjnego w Polsce,
w tym fachowe doradztwo techniczne

Danuta Burzyńska
Przewodnicząca
Komisji Weryfikacyjnej

prof. dr hab. inż. Kazimierz Szulborski
Przewodniczący Rady Programowej
miesięcznika Builder

Marek Zdziebłowski
Prezes Polskiego Klubu
Infrastruktury Sportowej

FIRMA NA MEDAL

[illegible]

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SPORTOWEJ

TEATR NARODOWY

ZAŁOŻONY W ROKU 1765

DYREKTOR TECHNICZNY

Warszawa, 3 października 2000 r.

Pan Tomasz Żebrowski

TOMMEX S.C.

02-776 Warszawa, ul. Arkadowa 29

Drogi Tomku,

Składam Firmie i Tobie osobiście serdeczne gratulacje z okazji Jubileuszu 10-lecia **„TOMMEXU".**
Podziwiam znakomite osiągnięcia w dziedzinie wdrażania nowych systemów elektroakustycznych i nagłośnieniowych.
Życzę kolejnych sukcesów zawodowych.
Życzę dalszego rozwoju Firmy.
Życzę wszystkiego co najlepsze w życiu osobistym.

Serdecznie pozdrawiam

Mirosław Tyrk

MINISTER KULTURY I SZTUKI
przyznaje

Panu Tomaszowi Zebrowskiemu

MEDAL ZA ZASŁUGI PRZY ODBUDOWIE
TEATRU NARODOWEGO

Warszawa 1996/1997

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Tommex Chooses Community for 'Globus' Solution

In a project that began way back in 2004, Warsaw-based Tommex was asked by the architects from the project company Arconel for cooperation with a range of room acoustic solutions and audio system designs for 'Globus', a multi-purpose hall with an ice rink and an audience capacity of 5000 people.

The planned facility would have the ability to host hockey, volleyball and basketball - and music events. By the time Tommex joined the project team the main building was almost complete. Tommex started by preparing a mathematical model of the hall using EASE 3.0 software and the virtual acoustic reality of the hall was far from good. In every instance, measurements were made using Gold Line DSP 30 B to check the RT60 parameters and the poor measurements confirmed those gained from EASE. The RT60 at some frequencies was almost 11 seconds. This presented Tommex with an enormous challenge to meet the customer expectations of a venue for music events and speech with good intelligibility.

The finance for Globus was already closed but a series of meetings between the client, the architects and Tommex persuaded the client to increase the budget for acoustic treatment. As a result, additional damping material on the ceiling and an acoustic screen above the main loudspeaker cluster were installed to the specification drawn up by Tommex. This resulted in an impressive decrease in average RT60 to below 3 seconds and RaSTI better than 0,5. Tommex admit the room remains less than ideal for music events but it is possible to attain quite good speech intelligibility; a remarkable achievement given the original acoustics and limited budget.

With the reverberation time remaining high and still with poor acoustics, the choice of the loudspeaker system was critical for Tommex. They considered the solution of a multi-point projection system, based on Community R.5 or WET series loudspeakers but there remained two factors that could not be overcome: Firstly the budget for system - more loudspeakers meant more amps and racks to drive them and also more batteries as the system also had to provide voice alarm as a core function. Secondly the budget for installation - more loudspeakers distributed in the hall would mean more cables and more installation work in the almost complete facility. Cables were a significant major cost as they had to meet the certified, fire-proof specification.

The chosen solution therefore had to be a central cluster, using the power of Community R2s. After precise simulation Elisabeth Zieli?ski of Tommex chose the asymmetrical R2-694X. The well-controlled dispersion of the loudspeaker enabled the design to avoid serious reflections from vertical walls, particularly in the vicinity of corners. Another important consideration in choosing Community R series was the products inherent suitability for an ice arena application. Being weather resistant they would not be susceptible to the usual corrosion caused by the humid environment found in this type of facility.

Seven Community R2-694X and six Community R.5-66TX form the main cluster. The R.5s fire downward and provide good coverage to the central arena with the R2-694Xs covering the audience areas. With this solution the R2s are driven at only 200W, easily meeting the specification for the voice alarm system to have at least 10% reserve power.

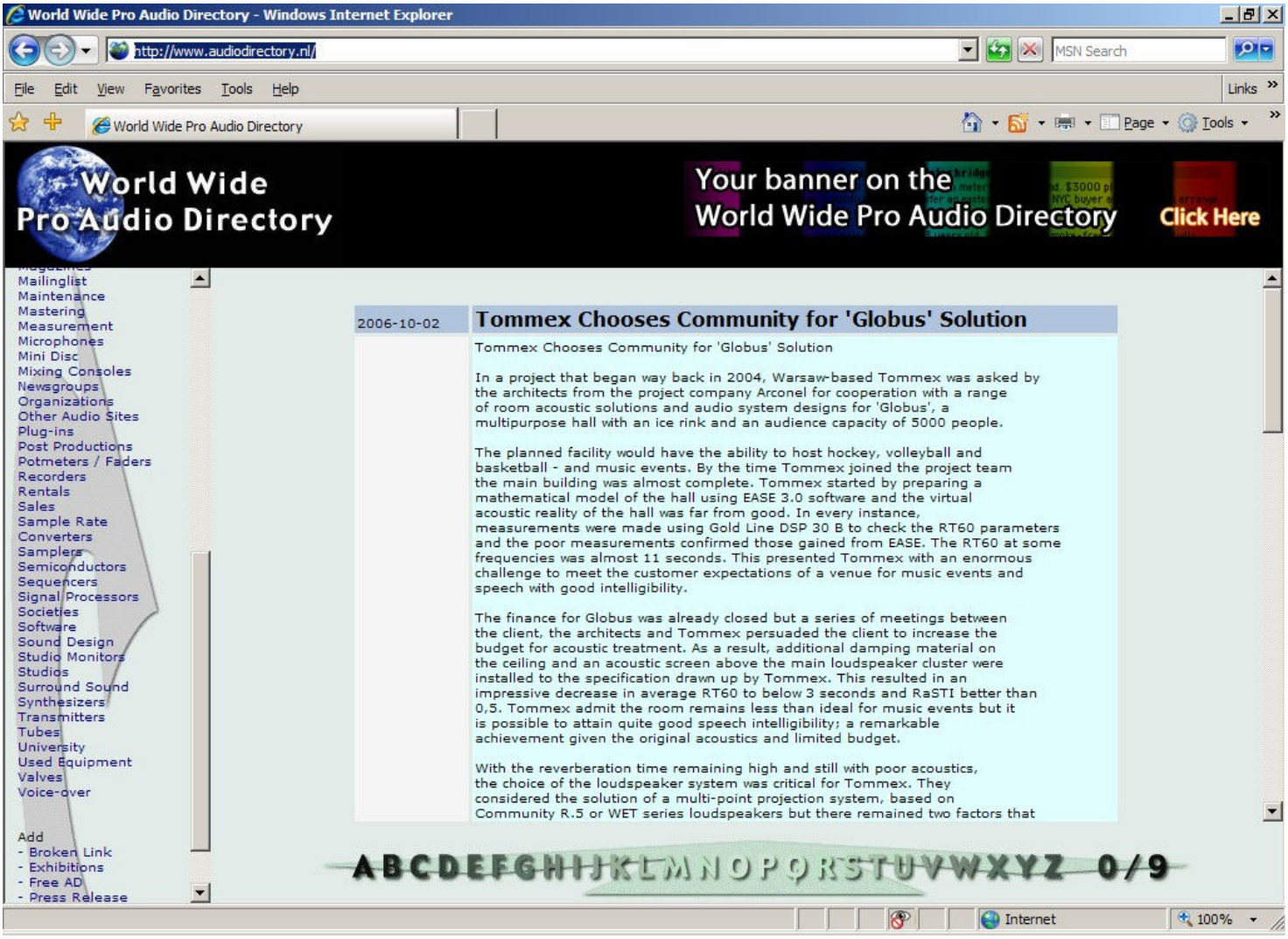
Wojciech Zieliski, heading the Globus project for Tommex, comments: "Final measurements confirmed the accuracy of the simulation and confirmed the importance of being able to use simulation in the design process for acoustically complex buildings. Of course this only works when a manufacturer's data for their products is totally accurate and honest and Community are outstanding in this respect. It makes our job a lot easier and gets better results."

Tommex used a base parameter for the system of 103 dB average SPL for 95% of the audience area with a frequency response of 100 Hz to 10 kHz.

Additionally, in accordance with new regulations, such facilities must be equipped with a voice alarm system which must use components certified by the National Institute for Fire Protection Technologies. Because the regulations were entirely new in Poland, the only certified loudspeakers were a few ceiling speakers, sound projectors and 15W horns. Tommex turned to the Institute with the idea of using properly suitable, but not certified loudspeakers for the venue and gained permission to install their designed system with the approval of the Institute. The rest of the system uses pre-certified components.

Zieliski concludes: "The final result is a unique 2-in-1 system that performs remarkably in this difficult environment and combines a voice alarm system and a sport system. Now installed, the system meets all of the parameters set by the client, the architects and the Fire Protection Department. The average SPL is 105 dB (-2/+3dB) and RaSTI in the worst locations is 0,5. The frequency range is limited to 90 Hz to 16 kHz and the main cluster works as two independent loudspeakers groups: one for seating areas and one for the main arena floor. They are driven separately and have individual equalization. The arrangement of the audience area loudspeakers even allows for up to three to be out of action and SPL drops by only 3 dB."

The system for sports events uses a Midas Venice 160 console, Sabine digital feedback eliminator, Beyerdynamic mics, Sony record and playback and Klark Teknik compression/limiting and equalization. Commentary for events can be made from four locations: the sound engineering room, the press cabin and two locations on the level of the arena, equipped with on-wall mixers for connecting headsets. The voice alarm system is from Swiss G+M Elektronik AG with BO 250 ev power amplifiers. Rated at 250W RMS these are able to deliver effortless short term power of 350W. The R2s are driven through Community TRC400 transformers at half power (200W) whilst the R5s are T versions working at 120W nominal power.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2006-10-02
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Sales and Orders

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With the reverberation time remaining high and still with poor acoustics, the choice of the loudspeaker system was critical for Tommex. They considered the solution of a multi-point projection system, based on Community R.5 or WET series loudspeakers but there remained two factors that could not be overcome: Firstly the budget for system - more loudspeakers meant more amps and racks to drive them and also more batteries as the system also had to provide voice alarm as a core function. Secondly the budget for installation - more loudspeakers distributed in the hall would mean more cables and more installation work in the almost complete facility. Cables were a significant major cost as they had to meet the certified, fire proof specification.

Wojciech Zieliński, heading the Globus project for Tommex, comments, "Final measurements confirmed the accuracy of the simulation and confirmed the importance of being able to use simulation in the design process for acoustically complex buildings. Of course this only works when a manufacturer's data for their products is totally accurate and honest and Community are outstanding in this respect. It makes our job a lot easier and gets better results".

Tommex used a base parameter for the system of 103 dB average SPL for 95% of the audience area with a frequency response of 100 Hz to 10 kHz. Additionally, in accordance with new regulations, such facilities must be equipped with a voice alarm system which must use components certified by the National Institute for Fire Protection Technologies. Because the regulations were entirely new in Poland, the only certified loudspeakers were a few ceiling speakers, sound projectors and 15W horns. Tommex turned to the Institute with the idea of using properly suitable, but not certified
loudspeakers for the venue and gained permission to install their designed system with the approval of the Institute. The rest of the system uses pre-certified components.

Zieliński concludes, "The final result is a unique 2-in-1 system that performs remarkably in this difficult environment and combines a voice alarm system and a sport system. Now installed, the system meets all of the parameters set by the client, the architects and the Fire Protection Department. The average SPL is 105 dB (-2/+3dB) and RaSTI in the worst
locations is 0,5. The frequency range is limited to 90 Hz to 16 kHz and the main cluster works as two independent loudspeakers groups: one for seating areas and one for the main arena floor. They are driven separately and have
individual equalization. The arrangement of the audience area loudspeakers even allows for up to three to be out of action and SPL drops by only 3 dB".

The system for sports events uses a Midas Venice 160 console, Sabine digital feedback eliminator, Beyerdynamic mics, Sony record and playback and Klark Teknik compression/limiting and equalization. Commentary for events can be made from four locations: the sound engineering room, the press cabin and two locations on the level of the arena, equipped with on-wall mixers for connecting headsets. The voice alarm system is from Swiss G +M Elektronik AG with BO 250 ev power amplifiers. Rated at 250W RMS these are able to deliver effortless short term power of 350W. The R2s are driven through Community
TRC400 transformers at half power (200W) whilst the R5s are T versions working at 120W nominal power.

The text above is equivalent to the company's official press release.

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Tommex chooses Community for 'Globus' Solution

UK - In a project that began way back in 2004, Warsaw-based Tommex was asked by the architects from the project company Arconel for cooperation with a range of room acoustic solutions and audio system designs for 'Globus', a multipurpose hall with an ice rink and an audience capacity of 5000 people.

The planned facility would have the ability to host hockey, volleyball and basketball - and music events. By the time Tommex joined the project team the main building was almost complete. Tommex started by preparing a mathematical model of the hall using Ease 3.0 software and the virtual acoustic reality of the hall was far from good. In every instance, measurements were made using Gold Line DSP 30 B to check the RT60 parameters and the poor measurements confirmed those gained from Ease. The RT60 at some frequencies was almost 11 seconds. This presented Tommex with an enormous challenge to meet the customer expectations of a venue for music events and speech with good intelligibility.

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(Chris Henry)

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