

BROADCAST

AV TECHNOLOGY





ROOM ACOUSTICS



Customer portfolio









CONSULTATIONS PROJECTS REALIZATIONS ACOUSTIC LABORATORY









CERTIFIED FOR GLOBAL SERVICES



CHRIS MILLER EXECUTIVE DIRECTOR PSNI GLOBAL ALLIANCE

Kevin Groves REVIN GROVES PRESIDENT

PSNI GLOBAL ALLIANCE

DISPATCH CENTER MODERNIZATION

The cornerstone of every dispatch center is its display wall.

It enables efficient monitoring of information on an LED display with a high level of detail, even under full room lighting. This ensures optimal working conditions, even in daylight. Thanks to the modular design of LED walls and their easy maintenance, users can achieve operational efficiency even in such a critical environment.

Modern monitoring centers are not just about the dispatch room itself.

A key factor is the integration of other workspaces with the central hub and dispatch data. As part of the daily journey of the facility, we will design the optimal layout of rooms, technology, and additional equipment to create a perfect ecosystem.





PROJECT / REALIZATION

200

As part of the dispatch center modernization project, we built a state-of-the-art dispatch workspace in the Home of AV hall in Voděrádky. The project was based on Samsung The Wall 1.2, a VuWall image processor, Busch dispatcher furniture, and AI-based image analysis software from BriefCam.



VOLUME: CZK 10 million

We create content

We specialize in unconventional installations, where we can fully and efficiently utilize all of our professional capabilities.

WE CREATE:

Video	LED
mapping	mapping
Digital signage installations	VR and and and and and an

INDUSTRIAL ACOUSTICS

Our goal in the field of acoustics is to provide comprehensive services from technical noise measurement, through the elaboration of offers for the implementation of acoustic measures to their delivery and installation.

From the range of our products we offer:

Noise barriers, screens, tiles

used to reduce noise around refrigeration units, diesel generators, engines and other stationary sources of noise in the working and outdoor environment.

Noise protection covers, fairings

for significant noise reduction at noise sources. Silencers, acoustic doors, gates, lighting, air conditioning units, etc. may be included.

Silencers

to reduce outdoor noise – precise design based on noise measurements from the source or as part of anti-noise fairings or covers.

Noise protection doors and gates

are mounted in a specific space with the required noise parameters – our acoustic products are designed on the basis of noise measurement in the frequency spectrum.

Audiological, interpreting booths

are corresponding to the requirements of relevant standards and the requirements of users, customers with regard to space and technical possibilities.

LED lighting system, fixed or folding seat, dimmed ventilation system solved by either a slow-running fan or a chimney effect are included.

Non-reflective and semi-non-reflective chambers, validation laboratories

Modification of existing premises or construction of new chambers, corresponding to ČSN EN ISO 3745, delivery including MaR, VZT and air conditioning, PBŘ, lighting, HVAC and others. Of course, including the processing of building permits and the subsequent creation of implementation documentation, static assessments, EIA and more.

Technical measurement of noise in the frequency spectrum to determine the characteristics and location of noise sources (using an acoustic camera if needed)

Pic #4a-b-c Acoustic camera, measurement results

Do you need our services?

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ACOUSTIC LABORATORY AVT GROUP

Pic #3 Validation laboratory Tymphany

Proposals for acoustic measures to reduce noise in the working and outdoor environment

Pic #5a-b Pipe banding, GZ Loděnice

AUDIOLOGICAL BOOTHS

We manufacture and supply audiometric cabins that meet the requirements of ČSN EN ISO 8253. Their size can be adapted to user requirements, while they excel in longevity and low maintenance. The steel version can be chosen according to the RAL swatch, in the AVT-DF version it is a surface treatment with foil and natural veneer. You can also choose digital printing technology.

Variable modular system

(choice of painted sheet metal or painted MDF - color design according to the swatch)

High values of airborne soundproofing

to meet the requirements of ČSN 8253 – Acoustics – Audiological examination methods

Unlimited size of individual panels

(wall and ceiling panels, soundproof windows and doors) allows you to create kits according to customer requirements

Special acoustically modified penetrations

for cabling and junction boxes, they are supplied especially for specific technological equipment of the consulting room

Ventilation natural (chimney effect), forced (small silent fan),

for larger cabins it is ideal to install a small silent air conditioning unit

Possibility of delivery of an access ramp for wheelchairs (door width at least 1 m)

We supply audiometric booths in cooperation with WIDEX LINE spol. s r.o.

LED lighting, built into the wall or ceiling of the cabin

(according to user requirements)

The modular system enables trouble-free assembly

without the use of special technical means

Junction box (connection cable)

classic composition 6 × stereo jack 6.3 mm,
2 × stereo jack 3.5 mm, 2 × cinch, possibility
of additional connection points

The audiology booth must be safe

(insulated el.), meeting the conditions of Government Regulation No. 54/2015 Coll., on technical requirements for medical devices

Measurement after implementation

 proving compliance with the requirements of the standard

Booth installation

via anti-vibration rubber plate / elimination of surface unevenness at the same time

The minimum outdoor size

of the audiometric booth for free sound field and quasi-free field is 1.2×1 m

Fixed seats, folding seats / without seats

Possibility of delivery including speakers, tables for audiometer, hooks for cabling.

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Atypical modifications of industrial equipment with the aim of reducing noise emissions, proposals for technical solutions, including static assessments, consultations with architects, designers in the field of construction, mechanical engineering, electrical engineering, air conditioning, MaR and other experts.

Noise protection screens

They prevent the free propagation of noise from the source (diesel generators, air conditioning units) while meeting the requirements for their cooling, maintenance and service.

In addition to high soundproofing (can be tuned to a specific source based on noise measurements in the frequency spectrum), they are also unilaterally absorbing.

The shell of the individual panels consists of a solid sheet metal 1.5 - 2 mm thick, on the side facing the noise source it is a perforated sheet metal. Inside the panel there is an absorbent material, selected according to the frequency spectrum of a particular noise source.

They are mechanically resistant, galvanized or painted in shades according to the RAL swatch. Curtains can include doors, gates or anti-noise blinds. The wall thickness respects the requirement for acoustic parameters, static loads or space constraints.

Noise barriers for stationary sources are not designed or evaluated according to ČSN EN 1793!

SILENCERS

Noise protection wall coverings

These are acoustically absorbing plates, inserted into a rectifiable structure with an optional air gap. An additional absorbent can be inserted in this gap. The visible side consists of perforated sheet metal or expanded metal in galvanized or Komaxit color in shades according to the RAL swatch. Electrical, air conditioning and other wiring can be laid behind the cladding. The dimensions of the boards are based directly on the spatial possibilities in the vicinity of noisy technology. This measure is used as a lining of reflective surfaces to prevent noise reflections and thus the creation of a diffuse noise field.

Silencers

absorber surfaces are selected according to the operating specifications so that they can be used even

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RAILWAY VEHICLES

Spatial acoustics and electroacoustics of station buildings and constructions

WE NOT ONLY SEE LIGHT BUT ALSO HEAR SOUND AT THE END OF THE TUNNEL

We can design sound systems for any type of space from small studios to auditoriums, multi-purpose halls, theatres, and stadiums. In our acoustic laboratory, we can verify and authorizedly measure the intelligibility of spoken word in a specific location.

Glass, tiles, concrete, enamelled sheet. Materials that prevail in the spaces of subway vestibules, tunnels through which the train passes, platforms and subways. Unfortunately, the reflectivity of these materials means that the sound that propagates in these places is often chaotic and unintelligible. Before every renovation or new project of the interiors of railway buildings, which are currently increasing, it is necessary to verify the future comprehensibility of operational reports. In the case of an evacuation report, it is more than necessary to understand it under all circumstances.

This is the moment when we receive the construction drawings from the project company, which we convert into an acoustic 3D model, assign existing acoustic properties to it and start calculating. Firstly, we are interested in the uniformity of acoustic signal coverage from loudspeaker systems, the reverberation time for a closed space, secondly and most importantly, in the intelligibility of the spoken word, the so-called parameter STI (Speech Transmission Index).

Based on the results, we then select and place suitable types of loudspeakers with the necessary certification, resistance to fire, temperature or humidity fluctuations. We take into account their directional radiation characteristics, load capacity, and through other calculations we determine to what extent the proposed solution will be functional. However, we cannot always achieve the ideal state without accompanying room acoustics adjustments. The resulting study, including the proposed types of loudspeakers, their distribution, power consumption and recommendations for acoustic ceilings or cladding, is then forwarded to the general projectman.

WE'LL CALCULATE THE INTELLIGIBILITY OF THE SOUND IN YOUR BUILDING WHILE IT IS STILL IN ITS DIGITAL FORM.

Railway station Prague Václav Havel Airport

Prague Bubny and Holešovice railway stations

We developed an operational sound system study for the two-level terminal serving both train and bus platforms. Both floors are connected by an open central area, so the mutual influence between them had to be taken into account. Train announcements should not disturb bus passengers, and

Design of the public address system for the platforms in the historical section of the main railway station and the connecting underpasses beneath them (including specifications for acoustic ceilings).

Design of the standard sound system for the platforms.

Design of the evacuation public address system for the railway station, including the vestibule and commercial areas.

Study of tunnel sound coverage for metro emergencies and controlled evacuations. Special speaker systems were used, specifically designed for tunnel sound coverage.

Design of the evacuation public address system for the metro, including the escalator shaft and the entrance vestibule

Design of the operational public address system, considering the spatial acoustic solution according to ČSN 73 0527, which allowed for several different sound system configurations to meet architectural requirements.

CULTURAL AREAS

CONCERT AND MULTIFUNCTIONAL

HALL KRAB Heart Transplant of the Imperial Baths

INSTALLATION OF A MULTIFUNCTIONAL HALL IN THE ATRIUM OF THE IMPERIAL BATHS, KARLOVY VARY

2023/2024

PROJECT / IMPLEMENTATION

Over a hundred years ago, the Imperial Baths were opened in Karlovy Vary, where a timeless machine once operated, delivering peat bath tubs across two floors of the spa. In 2019, the idea emerged to replace this machine with a contemporary one, transplanting a new heart into this unique spa building.

This red "crab" weighs over 130 tons, its parts stretch 11 km when laid end to end, it was coated with 1.3 tons of red paint, powered by 62 gearboxes, with 42 km of cabling, 300 seats, 650 meters of LED lighting, and a cinema screen with an area exceeding 100 m².

The technological organism was constructed mainly in 2023, in collaboration with the Gradior Tech Brno team. Thanks to the ability to change the shape of the entire "crab" and adjust the positioning of acoustic panels, the space can serve up to seven functions.

It can be transformed into a concert hall for a symphony orchestra, a cinema, a concert or lecture hall, a theater, a dance floor, or a hybrid lecture studio. The design process took the architects 2,760 hours, and over 50 technicians spent eight months fitting it into the atrium, like a ship in a bottle.

VOLUME: Over 150 million CZK

IMPERIAL BATHS KARLOVY VARY – SPA EXHIBITION

2024

► REALIZATION

The long-awaited reconstruction of the Imperial Baths complex in Karlovy Vary received a special touch from our company in the form of a multimedia exhibition dedicated to spa traditions from the era of the Emperor.

Under the direction of architect Martin Hejl, a breathtaking exhibition was created within the historic building of the former baths. The core elements of the installation include LCD monitors, laser data projectors, and spatial sound coverage throughout the entire complex.

What makes it truly unique is the use of high-performance 4K Panasonic projectors for mapping onto the walls of the inner atrium. From within the heart of the "crab," visitors can enjoy a multimedia experience that takes them through time, from ancient history to the spa traditions of the past. The experience is complemented by a seventeen-channel surround sound system, and the entire setup meets modern standards, designed for sustainability over the next decade.

VOLUME: Over 20 million CZK

2023

COMPLETE RECONSTRUCTION OF JIRÁSKOVO THEATER IN ČESKÁ LÍPA

PROJECT / IMPLEMENTATION

Jiráskovo Theater in Česká Lípa shines after its full reconstruction, not only with a fresh look but also with enhanced features. The audience can now sit in more comfortable seats in the main hall under a red, glowing starry sky, which we crafted from nearly five hundred LED diodes and complemented with a beautifully restored chandelier.

In the newly reconstructed building, we were responsible for the complete delivery and implementation of theatrical technologies, including stage and audiovisual equipment as well as stage lighting. We added a mix of conventional and intelligent lighting fixtures, along with dimmer units.

The equipment in both the stage area and the main hall includes an audio system, meaning sound reinforcement, equipment for sound processing and playback, as well as full audio/video distribution and the stage management system.

We modernized the entire set of stage rigging, including their control, and also took care of the curtains and fabric equipment for the entire stage.

The delivery also included full acoustic treatment not only for the main hall but also for areas such as the foyer, café, and rehearsal rooms, all meeting strict fire-resistance requirements. The installed wall coverings ensure optimal reverberation time in the main hall, without the audience noticing their micro-perforation.

Theater Hall under the Starry Sky

VOLUME: Over 40 million CZK

REFERENCES / CULTURAL AREAS ____

LARGE-FORMAT INFORMATION SCREENS OF THE CITY OF PRAGUE

PROJECT / IMPLEMENTATION

In 2022, our company began gradually equipping Prague's public transportation stops with outdoor Samsung LCD screens. These large-format panels complement some of the bus and tram stops designed by Olgoj Chorchoj, with the goal of informing citizens about events in the city.

Thanks to the fully outdoor models from the OH series, the screen network can operate year-round, even during harsh winter frosts. Prior to the installation, technical consultations and testing of the solution were carried out.

All screens can be centrally managed from a single control room, allowing content to be easily changed within minutes.

Our designers and structural engineers also created the outdoor enclosures for the Samsung screens.

2024

VOLUME: Over 50 million CZK

COMPLETE RECONSTRUCTION OF ARENA THEATER

PROJECT / IMPLEMENTATION

As part of the extensive reconstruction of one of the most prominent multicultural theater scenes in Slovakia, not only the building itself but also the audiovisual technologies were modernized, significantly enhancing the entire experience.

This transformation is primarily due to the installation of an immersive sound system, which literally surrounds the audience with sound.

The installation included not only the complete audio chain and a wireless microphone system but also a set of projection technologies for screen sizes up to 10 × 5.4 meters.

The camera system and video system, including distribution and recording, are another key strength of the solution.

All systems are interconnected with state-of-the-art cable connectivity, ensuring the protection of the investment for at least 10 years.

The implementation also included the delivery, installation, setup, and training of these systems, as well as the creation of manufacturing and implementation documentation, along with documentation of the actual state from AVT Group a.s.

As part of the reconstruction, the basic set of equipment was delivered, with plans for future additions as the operation of the building progresses.

VOLUME: Over 15 million CZK

2024

REFERENCES / CULTURAL AREAS

INSTALLATION OF THE UNIQUE L-ISA AMBIANCE ARTIFICIAL REVERBERATION SYSTEM AT THE NEW STAGE OF THE J. K. TYLA THEATER IN PILSEN

2022

PROJECT / IMPLEMENTATION

In the summer of 2022, the new stage of the J. K. Tyl Theater in Pilsen underwent a world-first enhancement. The theater hall was equipped with the **Ambiance** chain from the renowned French brand L-Acoustics. This was the very first complex installation of its kind globally, combining immersive sound with the electro-acoustic modification of the space itself.

For human perception, it is crucial to connect the auditory and visual stimuli. The L-ISA system ensures this connection, blending what you see with what you hear.

It is now possible to variably adjust the acoustic conditions according to current needs, with the simple press of a button. The installed system allows for up to three times the extension of the basic reverberation time, which is particularly appreciated in opera, where the theater hall can be tailored specifically to the piece being performed. In an instant, concert hall conditions can be created, allowing the symphony orchestra to be perceived by the audience as though it were in a real space. Another significant function of this installation is the sound support for the performer on stage, allowing them to be heard just as well without a microphone as with one.

The system for adjusting spatial acoustics consists of speakers mounted on the walls and ceiling, and a network of microphones installed throughout the entire ceiling area of the theater hall. Immersive sound is provided by speakers placed along the entire length of the stage portal, replacing the original sound system. The brain of the entire system is the L-ISA processor, in which all the algorithms ensuring immersive sound and reverberation time are implemented.

Technology supplier: PRO MUSIC s.r.o.

VOLUME: Over 10 million CZK

Ambiance

The implemented L-ISA system, whose abbreviation stands for Immersive Sound Art, enables exceptionally easy adjustment of acoustic conditions through the Ambiance electro-acoustic reverberation chain, ensuring an excellent listening experience regardless of the genre of the THEATER performance.

RECONSTRUCTION OF THE CULTURAL HOUSE IN OTICE

2023

PROJECT / IMPLEMENTATION

In Otice, located in the Opava region, a pleasant multifunctional center was created thanks to the reconstruction of the cultural house.

We equipped its spaces with complete AV technology, including stage lighting and a projection screen. For multipurpose use, the spatial acoustics had to be optimized, taking into account, for example, potential performances by a children's choir. We installed low-frequency broadband absorption panels and resonators on the walls and ceiling, placed acoustic diffusers on the front wall of the hall, and treated the back wall with perforated drywall.

For the creation of the Otice coat of arms, the dominant element of the main hall, we used our own CNC milling machine. This coat of arms, along with the acoustically treated panels that are fire-resistant, was manufactured directly in our workshop.

VOLUME: Over 5 million CZK

Simple control of system components according to the latest trends

RECONSTRUCTION OF THE CULTURAL HOUSE IN LETOHRAD 2023

PROJECT / IMPLEMENTATION

As part of the extensive reconstruction of the Letohrad Cultural House, we provided the complete supply of audiovisual technology and spatial acoustics.

In addition to theater and concert sound systems, we modernized the main hall for digital cinema operations, including the possibility of 3D projection. A new perforated silver screen was installed, which allows for adjustable masking, and the entire screen structure can be motorized to extend into the rigging space.

Our implementation also included comprehensive acoustic modifications, not only of the main hall but also of adjacent spaces such as the foyer, chamber hall, dance hall, and two music rehearsal rooms in the basement. These rooms were equipped with speakers, projectors, mixing consoles, screens, and LCD displays as needed.

A special feature of this installation is UV printing directly on the acoustic panels, as well as printed patterns on the fabric upholstery of the balcony front. The entire AV setup is complemented by custom Samsung LCD information totems, which can be used in both semi-outdoor and outdoor environments.

VOLUME: Over 20 million CZK

RECONSTRUCTION OF THE ZUBŘÍ CLUB

PROJECT / IMPLEMENTATION

A revolution in sound and visuals in the heart of the Beskydy Mountains, in the town of Zubří, located west of Rožnov pod Radhoštěm.

The hall, with a seating capacity of 240, is now multifunctional, and thanks to the telescopic seating, it can be easily adapted depending on the type of event. We installed a sound system by L-Acoustics in the hall and stage area. Additionally, we equipped the control room and technical rooms with new technologies for modern digital cinema projection. Throughout the entire building, we ensured sound and image distribution, including the inspector's system. Two 65" monitors were placed in the foyer, connected to a digital signage system by BrightSign, allowing the building manager to remotely upload current content such as images, video loops, video streams, RSS feeds, etc.

Technologies:

- _ L-Acoustics sound system
- _ Clearcom communication system
- _ 7.1 multi-channel sound system, Dolby Digital, and DCI projection with a Christie RGB laser projector, providing crystal-clear images on a wide screen
- Digital mixing console from the British company Digico, premium wireless microphones from the American company SHURE

VOLUME: Over 20 million CZK

REFERENCES / CULTURAL AREAS

REVITALIZATION OF THE "MALÝ SVĚT TECHNIKY U6" EXHIBITION

PROJECT / IMPLEMENTATION

Having fun without causing trouble. In June 2023, after an extensive reconstruction, the Malý svět techniky U6 reopened, located within the protected zone of the Lower Vítkovice Area. We played a significant role in the revitalization of this remarkable exhibition.

The entire exhibition is divided into six key sections, each focusing on a specific theme that elaborates and explains various aspects of human technological progress. Visitors can interactively explore these areas of advancement.

One of the highlights is the continuous 360-degree projection, created using seven Panasonic projectors, including custom-made content. This unique projection offers an immersive overview of technological progress throughout human history. We used the same techniques as those applied in creating planetarium projections.

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VOLUME: Over 15 million CZK

2023

MUSIC THEATER KARLÍN – MAIN SOUND SYSTEM UPGRADE 2024

PROJECT / IMPLEMENTATION

At the Music Theater Karlin, we installed the exceptional L-ISA hyperreal sound system by L-Acoustics. This system is currently regarded as the most complex and modern sound system capable of ensuring the same listening quality for all audience members in the hall.

The system consists of nine front-facing clusters made of L-Acoustics ARCS 10 speakers, with the entire sound setup including 118 loudspeakers powered by eight 16-channel LA7.16 amplifiers. The total installed maximum amplifier power is 166 kW.

Our installation also included a revolutionary tracking system with artificial intelligence from Naostage, which uses both camera and radio transmission to track the movement of performers. The immersive sound system synchronizes the audio with the visual information of the moving performer. The sound moves in the same direction as the actor, ensuring that the sound information is identical for all listeners.

The entire system is controlled through the highly intuitive and user-friendly L-ISA Controller, which enables very efficient work for the sound technician.

VOLUME: Over 20 million CZK

CENTRE FOR MENTAL REHABILITATION, BEROUN - AUDIOVISUAL TECHNOLOGY DELIVERY

PROJECT / IMPLEMENTATION

In June 2023, the Rehabilitation Hospital Beroun proudly opened a unique facility dedicated to mental health treatment: the Centre for Mental Rehabilitation.

Dramatherapy, art therapy, music therapy-these are just a few of the wide range of therapies that take place in these exceptional spaces. We supported these therapies primarily with technology.

In the multifunctional hall, we installed a projector, a screen, sound system, and various lighting technologies, all serving not only for presenting but also for theatrical therapy, known as dramatherapy. We equipped the gym, spacious rooms with a pool, and a fitness area with conventional and recessed sound systems and also took care of the technical facilities for the control room.

Music therapy takes place in three rooms: large and small group rooms, and a closed music box. The activities can be recorded and captured using wireless microphones in the studio. The studio is also equipped with technology for recording and playing back sounds into specific rooms, a mixing console, and a computer for recording. The sound system in the group rooms consists of recessed ceiling speakers and a wireless speaker for the music box.

2023

VOLUME: Over 15 million CZK

A REVOLUTIONARY APPROACH TO CARING FOR YOUR MENTAL WELL-BEING

2021

RECONSTRUCTION AND MODERNIZATION OF POKLAD HOUSE OF CULTURE

PROJECT / SUBCONTRACTOR IMPLEMENTATION

In the legendary cultural house in Ostrava, we participated in the modernization of AV technologies of the theater hall, social hall, dance hall, music club, cultural center, lecture hall and multifunctional classrooms.

The smooth communication operation is now ensured by an intercom communication system for communication between the theater staff. The technical equipment also includes a wireless microphone set, an inspector system of loud call-out for communication during the performance, and an HD camera system with a video editor.

For the sound system of the theater space, we installed a variable system supplemented by sub-bass sections, including the effect sound system for the hall and the director's workplace. Likewise, the other rooms are equipped with modern electroacoustic chains with a sufficient number of connection points for additional mobile sound.

We also equipped the building with a video information system and a complete AV infrastructure.

As part of the renovation, we also helped build a digital mini-cinema as part of the operation of the cultural center.

2021

EXHIBITION OF FAMOUS CZECH COMPOSERS IN THE NATIONAL MUSEUM

REALIZATION

With the help of technology, we are reviving and making the expositions in the National Museum more attractive. Visitors no longer observe only inanimate exhibits, but are directly drawn into the experience with the help of lighting, video and sound installations.

For this exhibition, we have produced a unique acoustic construction that accompanies the visitor through a sound labyrinth. In it you can hear subtle sounds that were the inspiration of famous composers, such as the rustling of trees, female laughter, or street noise. In the meanders of the labyrinth, the essential musical works of selected composers are exhibited, and thanks to our acoustic construction, the visitor can enjoy listening to them without the individual works interfering with each other.

The exhibition opens with a large immersive light-sound installation, its backbone consists of music by selected composers – Smetana's "Vltava", Dvořák's "From the New World", Janáček's Sinfonietta and a double concerto for two string orchestras, piano and timpani by Bohuslav Martinů.

The scenography is created by 200 pieces of DMX LED wash luminaires placed on special floor mats in a regular matrix arrangement, which are complemented by the most modern BOSE MSA12X speakers, which ensure a faithful performance of classical music. The entire entrance hall is also acoustically treated so that the visitor has the best possible experience of the presented works.

The sound of the whole exhibition naturally flows like the water in the river.

Architect: Ing. arch. Martin Hejl and Ing. arch. Lenka Hejlová from the Loom on the Moon studio (loomonthemoon.com). Everything was managed by Mgr. Martin Musil and Tereza Lišková.

VOLUME: CZK 9 million

NEX (New EXpositions) History

2021

▶ REALIZATION

Thanks to audiovisual technologies, we connect the individual parts of this exhibition into one told story of our history. New exposition in the National Museum called NEX History was a nearly two-year marathon of supply of exhibition cases, atypical objects such as the Grotto and Rotunda or exact replicas of historical objects. The new exhibition, located in eight halls on the first floor, is one of the most important supplies for the National Museum.

The visitor immerses himself in the action thanks to interactive touch tablets, projections, including professional video mapping, and also through virtual reality.

Of course, there are also special AV sets that enliven the exhibits themselves. The exhibition includes unique elements, such as an interactive book – a replica of the historic Codex Gigas with video mapping, which responds to the rotation of individual pages.

Architect: Ing. arch. Lukáš Brom and Ing. arch. Štěpán Tláskal from The Builders studio (www.builders.cz) Everything was managed by Mgr. Petr Brůha and Mgr. Tereza Mazancová.

VOLUME: CZK 50 million

PANORAMIC PROJECTION BETWEEN NATIONAL MUSEUM BUILDINGS

PROJECT / REALIZATION

There is a connecting corridor between the old and new buildings of the National Museum, which is a new exhibition space. On its walls visitors can see an animated "live" image that shows the history of Wenceslas Square in time.

Our company was in charge of the supply and installation of all the AV equipment and lighting, including cabling.

The entire projection is nearly 60 meters long and consists of 38 projectors that create an image which is perfectly seamless.

We have chosen ultra-short projection projectors for the projection to avoid dazzling visitors while eliminating the disturbance of the projection by their shadows.

Before starting the installation, we passed an operational test to confirm the functionality of the system beforehand.

VOLUME: Over 15 million CZK

ROOM ACOUSTICS IN THE CZECH RADIO COMPLEX

2019

REALIZATION

As part of the modernization of the studio and the control room of Czech Radio Dvojka, we have ensured the complete installation of acoustic interior modifications according to the architectural design, including the documentation of production.

For the walls of both rooms, we have made perforated joinery and acoustic panels printed according to the wishes of the marketing ČRO department, we installed a grid ceiling with plasterboard elements to ensure the access to the cable distribution.

We designed a special acoustic window for the walls between the rooms to provide the necessary visual contact, but they do not let any sound through the three layers of glass of different thicknesses and the tilt of their vertical axis to reflect the sound towards the ceiling with absorbent material.

VOLUME: Over 1 million CZK

Before the installation, we performed acoustic measurements and based on them we adjusted the calculations and refined the original design.

SOUND MODERNIZATION IN REDUTA THEATER

2019

DESIGN / REALIZATION

At Brno's Reduta Theater, they decided to modernize the old sound system in order to meet the ever-increasing demands for the sound image of theater productions and to keep up with the current developments in the field of electroacoustics.

As part of the modernization, we continued the existing infrastructure and installed new power elements of the sound chain.

During the installation we also designed a complete sound design of the whole system and for even coverage of the auditorium by the acoustic signal, we chose the LCR configuration supplemented by a sub-bass speaker system, effect sound on the sides of the hall and side and rear sound of the stage for the needs of the actors.

VOLUME: approx. CZK 5 million

A NEW SOUND SYSTEM OF THE ESTATES THEATER

2018/2019

DESIGN / PROJECT / REALIZATION

At the Estates Theater, we designed and later installed new power sound systems, including the cable distribution and cable infrastructure.

We replaced the original static sound system placed in the boxes with movable loudspeakers suspended on winding point directly in the stage portal. As a result, the user has greater variability for the needs of individual performances.

We designed the sound system so that its installation is as sensitive as possible to the interior of the theater.

The design was based on simulations on a 3D acoustic model and we chose the LCR configuration supplemented with a subbass loudspeaker for even coverage of the auditorium with the acoustic signal.

All of the elements used were custom made by a manufacturer so that their color exactly matched the color of the stage canopy.

VOLUME: Over 5 million CZK

WE EXPANDED CONFERENCE POSSIBILITIES OF PRAGUE 2016/2019

DESIGN / PROJECT / AUTHOR SUPERVISION

For the conference rooms of the new multifunctional 02 UNIVERSUM center, we have designed and elaborated project documentation of the complete operating file of AV equipment and room acoustics and during the implementation we performed the authorial supervision.

Comfortable operation of conference halls in addition to AV technology is providing acoustic tiles, which we designed based on accurate calculations.

We designed the technology of the large B and C halls so that they could be divided into 3 smaller conference rooms by mobile partitions. Each of them will be equipped with its own projection, sound system and connection points. Also these separate units were completed by a large and main projection if the entire area of the hall is fully utilized.

For the large B and C halls we also designed camera platforms for eventual television broadcasting.

VOLUME (AVT IN THE WHOLE 02 OBJECT): CZK 50 million

We are not kidding! We do measure acoustics.

When you meet us with a weapon in our hands, you don't have to give us your wallet. Just close your ears and look forward to the fine-tuned acoustics we can do in our sleep thanks to our experience of careful measurements.

2019

THE PUPPET THEATER SOUNDS AND SHINES BETTER NOW THANKS TO US

DESIGN / PROJECT / REALIZATION

In Puppet Theater, Ostrava, we reconstructed the system of stage lighting including its control system for its controling. And we also installed a new audio technology – power sound system, wireless microphone system, wiring and connection points.

We equipped the theater with dimmable conventional luminaires and intelligent luminaires.

We doubled the capacity of the dimmed channels.

The theater has a new data infrastructure that is ready for further expansion (such as video distribution).

All the audio technology elements now use digital audio transport in comparison to the original analog distribution.

system ts controy – power

VOLUME: Over 10 million CZK

REFERENCES / CULTURAL AREAS _____

REVITALIZATION AND EXPANSION OF THE LIGHTING SETUP USING MODERN ENERGY-EFFICIENT LED TECHNOLOGIES

PROJECT / IMPLEMENTATION

At the Puppet Theater in Ostrava, we are no strangers to innovation.

In 2023, we carried out a modernization of the lighting setup and transitioned to LED lighting technologies. This delivery included a complete distribution of new power and data cabling, including the installation of distribution boards and connection points. The entire system for stage, auditorium, work, and orientation lighting is controlled through combined panels, offering both physical buttons and LCD touchscreens. To enhance the scenographic possibilities, new scissor pantographs were installed.

An interesting feature of the system is that the entire stage lighting is controlled not only by traditional lighting consoles but also by an advanced Extron control system, which makes user functions accessible to a wider technical staff and the entire theater's stage crew.

2023

VOLUME: Over 10 million CZK

EQUIPMENT OF AN AIRSHIP, DOX

2017/2018

DESIGN / PROJECT / REALIZATION

A space of a wooden airship Gulliver placed on the roof of the contemporary Art center DOX has been equipped with an AV technique so that it could be used for lectures, exhibitions, screenings and meetings of contemporary art. Due to the atypical shape and design of the airship, our designers created a simple system with a central projection and a minimal amount of cabling associated with the power line to reduce the number of interventions into the structure.

An atypical cabling (the use of atypical fixings elements).

An emphasis on esthetic design due to the visible installation of the cables.

Anchoring does not interfere in the static of the structure.

VOLUME: approx. CZK 1 million

The AV switchboard was installed into a technological stand with a constant temperature.

WE HAVE RECONSTRUCTED TECHNOLOGY OF ONE OF THE BIGGEST THEATERS IN THE CZECH REPUBLIC

2017/2018

DESIGN / PROJECT / REALIZATION

The Janacek Theater in Brno just went through the greatest reconstruction in its history. We had designed and then implemented the modernization of AV technologies and a system of communiction for this reconstruction. This included the whole sound system (speakers, power amplifiers, audio consoles, wireless microphone system), camera chain, intercom and radio system, and technical workplaces (signaling room, sound cab, control room, editing suite, rehearsal hall).

The stage managing system is enhanced by wireless communication.

The system of loud call-out ensures signal distribution to 24 theater zones.

The camera system provides the staff with a preview of what is happening on the scene and allows it to be recorded and played afterwards and even to be connected to the lighting.

VOLUME: CZK 60 million

There is a surround sound system designed in the main hall offering conditions for a creative work with sound effects being done during the performances.

IN THE JANACEK THEATER WE BUILT A SUPERMODERN **RECORDING COMPLEX.**

PROJECT / REALIZATION

The entire recording complex consists of a recording room, control room, machine room, speaker room and a production room. All of these rooms are equipped with the most modern technology and we have solved the whole supply and installation of the room of acoustics. Also including designs of acoustic models.

The heart of the entire recording complex is the AVID ProTools HXD with a full integration of DANTE. The system supports up to 24-bit/192 kHz in 7.1 surround and is complemented by a wide range of AD converts. Therefore to accommodate the required variety of sound modifications we added a plug-in software into the system (Waves, Oxford, etc). An integral part of the whole system is a very extensive set of analogue Avalon, Neve, Focusrite instruments. The whole solution is complemented by top reverbs Bricaasi and Lexicon.

2017/2018

VOLUME: CZK 8 million

"

The studio is equipped with state-of-the-art technology which is currently used around the world. There is no other place in the Czech Republic where such diverse audio processing technology with this range would be installed.

Ing. Martin Vondrášek CTO

Top acoustics

When designing room acoustics, we put the main attention on the directing room, which enables mixing and editing audio signals in optimal acoustic environment. Acoustic elements are tailor-made and placed mostly on the ceiling and walls. The other rooms' acoustics is designed mainly on ceilings with suplementary elements on exposed positions.

2017/2018

WE HAVE REALIZED A COMPLETE TECHNOLOGICAL **DOX+ HALL EQUIPMENT**

▶ IMPLEMENTATION PROJECT / REALIZATION

As a part of the new DOX Center we have designed and implemented the new equipment for a multipurpose hall consisting of AV technology (projection, sound and intercom), theater technology stage technology including the transport platform system), stage acoustics and lighting, and footbridges on the roof of the center.

We have placed a rotating body on the ceiling of the hall to change the acoustics according to the artist's needs.

In order to achieve the most optimal sound, we have installed the sound systems for the purpose of a cinema and events such as concerts and conferences.

We have ensured the manufacture and installation of a mobile platform which maximizes the flexibility of the hall.

VOLUME: CZK 25 million

Due to the fact that we were the general conductors of all the technologies, we were able to create a large distribution net with associated management for all operational sets, instead of building separate networks for individual technologies. Although *it required high coordination and management* requirements, it allowed us to connect the technologies so that they could cooperate. And controling them was very simple.

Ing. Martin Vondrášek CTO

"

The acoustics here is good. I never doubted it wouldn't be good enough. I am surprised how much better it is.

> Petr Kotík, Composer and Conductor

ALSO ONE OF THE LARGEST ROLLING SCREENS IN THE CZ WAS CONSTRUCTED BY US IN THE DOX+ CENTER.

2017/2018

▶ IMPLEMENTATION PROJECT / REALIZATION

It is a large format of electric projection screen with dimen-sions of 11 × 6 meters. You can see the instalation of this giant in our gallery.

The surface of the projection screen is perforated so that the mobile sound system could be placed behind the screen.

Rolling up and down of the projection screen is provided by a powerful maintenance-free engine with a thermal overheating warning.

Automatic winding end stops ensure safe controle of the screen.

The projection screen has a unique rolling system, where the projection surface is being wound up on a bottom shaft powered by a motor and side guide wires. This is how the flat surface of the projection screen is assured even in such large dimensions.
2017

WE INSTALLED 30 METERS LONG PANORAMIC **PROJECTION AT STC SKODA AUTO**

▶ REALIZATION

We have equipped one of the most modern educational centers in automobile industry with a unique panoramatic projection screen for top-class presentations within trainings, conferences and social events.

30 meters long projection is provided by 7 laser projectors with HD resolution.

Thanks to the edge blending technology the images from individual projectors are perfectly integrated into one unit with unvisibe seams.

With high lightness of 10.000 ANSI Im projectors show details even in the dark areas of the image.

An efficient graphic processor Barco E2 ensures the image signal processing and also the connection of the projections into one image with the resolution of 11 520 × 1 080 px.

Catalyst v5 on the platform MacPro is being used as a source of the real time native background.



VOLUME: On request







Automatic calibration of the whole system within 20 minutes

Combining images from seven projectors into a single unit is a time-consuming and demanding operation. Color delivery is influenced by the changing parameters of the environment and also by the projector's age. For a totally uniformed picture it is necessary to perform this calibration repeatingly and preferably before every single major event. Therefore we have simplified the calibration process and added an automatic calibration chain that ensures flawless display within aprox. 20 minutes.

WE EQUIPPED THE LAURIN & KLEMENT FORUM IN SKODA AUTO MUSEUM

DESIGN / PROJECT / REALIZATION

The multi-purpose hall with nearly 600 seats has two basic variants how to arrange listening areas - with and without elevation. To ensure adequate listening conditions for both variants without requiring any manipulation, our designers concepted a sound system corresponding with the type and use of space and its acoustic features. We have implemented the equipment of the hall, directing room and technical base. Then we set up the whole system and adapted it accordingly to the requirements of the operation.

The installed sound system is able to provide all kinds of operations without any manipulation, including any requirements of external renters.

The sound system consists not only of the main sound system, but also of the additional speakers from a leader in this field - L-Acoustics. The total output of the amplifiers is 60 kW which seems unbelievable.

We used the latest technology in the distribution of audio signals and connected each other via the Dante and MADI protocols.



VOLUME: On request











What audio technologies did we install?

- ____ A mobile mixing console DiGiCo SD12 which can be connected to the connection points under the floor of the hall or to those on balconies.
- ____ A mixing console DiGiCo S21 to the sound direction.
- ____ A digital wireless microphone system Sennheiser 6000.
- ____ The main sound system of the hall that includes additional L-Acoustics speakers.









SCHOOL AREAS

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RECONSTRUCTION OF LISTING ROOM P6, FTVS UK

2021

PROJECT / TURNKEY IMPLEMENTATION

We carried out a complete reconstruction of the auditorium, from building modifications, through ensuring optimal acoustic and lighting conditions, to equipping with modern technologies, including their infrastructure.

Thanks to the custom-milled acoustic cladding and the acoustic ceiling with ceiling speakers, we have achieved maximum intelligibility for the speaker. The installed Sennheiser set of portable microphones supports the comfort of interpretation.

The lecturer has at his disposal a set of projection screens and a description and interactive whiteboard. Everything is fully automated, including dimming the room at the start of the projection.

The control panel in the department offers the lecturer pre-programmed scenarios, thanks to which he quickly and easily selects the desired mode and the technology is put into operation automatically.

We have also equipped the lecture hall for e-learning with the possibility of a live stream, which, thanks to optimal acoustic conditions, excels in the intelligibility of the recording.

We also took care of the optimal climate of the auditorium thanks to the air conditioning unit, and because we take care of the planet, it is of course equipped with heat recovery.

Students will certainly enjoy the connection points at their desks, both with classic sockets and USB chargers. For those who are hard of hearing, there is an induction loop under the raised floor.

The modern design of the entire auditorium is highlighted by indirect RGBW LED lighting installed around the perimeter of the acoustic ceiling.





VOLUME: CZK 7 million











2019

INTERACTIVE ENTRANCE SPACES AT CULS

CONSULTATION / REALIZATION

In cooperation with the architectural IO studio, we participated in the revitalization of the entrance lobby of the CEMS building at the Czech University of Agriculture.

We've integrated interactive whiteboards that allow students to collaborate creatively. They can write on them with a special pencil or finger, and they can also attach and import any digital content to it.

We also equipped the room with large format monitors connected to the school information system.

We have upgraded the interior concept by replacing classic bulletin boards with digital bulletin boards that allow remote management of its content. They are definitely more attractive for students.



VOLUME: Over 1 million CZK

AMSUNG











HISTORICAL AULA AT CULS

2019

► REALIZATION

The Czech University of Agriculture is reconstructing the auditorium building from the mid-1960s and we are in charge of the implementation of AV technologies.

In the main hall we will install a large projection with 12 × 5 m screen, multichannel sound system in 7.1 system, HD camera chain with PTZ cameras, NDI chain including the editing room, which allows live production and streaming into and outside of the school network. We are also preparing for picture and light direction for technical service.

We will design the stage as a multiplatform – we will equip it with connection points with NDI and SDI connectivity and in case of audio signal with analog and data input for transmission via DANTE or MADI protocol.

We will also install an interpreting system for two language variants in the hall and complement it with Sennheiser MobileConnect technology, which allows you to listen to the translation using your own mobile device.



VOLUME: Over 15 million CZK













FACULTY OF MEDICINE SIMULATION CENTER, MUNI

2020

► REALIZATION

We have equipped the simulation center for medical training with specialized AV technology, which simulates the behavior of real patients with the help of the proposed scenarios. Teaching can be monitored in real time, recorded, commented on, annotations and tags can be created for later analysis, and the course of the simulation scenario can be changed in response to a given situation.

We have integrated the new AV technology into the current infrastructure so that it can be managed by a central ICT workplace.

The system is implemented as extensible depending on the development of the simulation center with cost minimization using standardized technologies.

Students can use simulators for a pre-hospital care and emergency, for an ambulance, for operating rooms, a dispatching, and for standard bed room or an ICU.

For example, X-rays, ultrasound video, blood images, and other image files can be used to prepare teaching scenarios. And sounds as well, such as the hustle and bustle of the hospital environment.



VOLUME: CZK 30 million





REFERENCES / SCHOOL AREAS















SIMU je mistem, kde neni vřichem udělat chybu...

INNOVATION OF AV TECHNIQUE OF LF UK TEACHING SPACES 2021

▶ REALIZATION

We have modernized the equipment of two lecture halls and four seminar rooms at the Medical Faculty of Charles University in Hradec Králové to meet current standards in the field of teaching. The new AV technology ensures more comfortable control, better quality of image data and audio signals and thus significantly better quality of content created for e-learning purposes.

The central element of the whole solution is the SDI infrastructure and the matrix switcher, all in the 12G standard.

In one of the lecture halls, with an emphasis on intelligibility and even sound signal coverage, in addition to the main sound system, we also installed rear-facing loudspeakers and miniature loudspeakers in the department for front listening lines. Wireless microphones and noise microphones are not missing in the audio equipment.

For the purposes of image presentation, we have insta-lled projection equipment in auditoriums and touch LCD displays in seminar rooms. In addition, we equipped the lecture halls with a camera chain for recording lessons.

As part of the reconstruction, we also installed scenic lighting in both auditoriums, which is controlled by a DMX desk.



VOLUME: CZK 20 million













RECORDING STUDIO, DEPARTMENT OF MUSIC SCIENCE FF MUNI 2021

DESIGN / PROJECT / REALIZATION

During the reconstruction of the auditorium, we created a multi-purpose space that can be used as a recording studio or a teaching space with the possibility of student presenting audio, audiovisual and multimedia realizations and projects. As part of the reconstruction, we provided building modifications, room acoustics and all AV equipment.

In order to be able to use the space for various purposes, it was necessary to provide variable acoustics of the studio. As part of the project, we therefore designed a system for artificially extending the reverberation time. However, the acoustic parameters of the room can also be slightly adjusted using a double system of window blinds with different degrees of sound absorption.

The entire studio is operated by the director's room which also serves as a specialized classroom for future sound engineers.

As part of the reconstruction, we also addressed building acoustics to prevent the spread of noise to the facilities adjacent to the studio.



VOLUME: CZK 20 million



For optimal acoustic conditions, we have equipped the premises with custom-made acoustic elements and its production was ensured by our CNC machine.





RECONSTRUCTION OF THE FACULTY OF PHILOSOPHY OF MU 2018/2019

DESIGN / PROJECT

For the premises of the reconstructed building of the Joštova 13 building, we designed AV equipment including a tailor-made control system according to the school's graphical manual. In addition to seminar and lecture classrooms, we also dealt with a specific roofed open space – the atrium.

The atrium equipment is based on the large lecture room and is also extended with variable features for multi-purpose operation.

The central projection was completed with presentation monitors for work in smaller groups. Students can join them and share digital content within teams which makes the teaching more varied and decentralized.

Throughout the building we have also designed LCD panels for the information system, which will display operational information and planned events.



VOLUME: Over 5 million CZK













2019

WE EDUCATE NEW INTERPRETERS

DESIGN / PROJECT / REALIZATION

For the language department of the University of Ostrava we designed and implemented a special complex for lectures of interpreting, which consists of an interpreting laboratory with 9 interpreting booths, a lecture hall for 120 students and a small training room with an interactive whiteboard for staff.

We had to design a system with functions beyond classical interpreting so that the teacher could interfere into the interpreting and instruct the students in specific cabins.

Students have in their cabins interpreting desks, which enable them to communicate with the teacher in addition to interpreting.

Teaching can be recorded, errors can be studied, and thanks to that it is possible to improve the interpretation process.



VOLUME: Over 5 million CZK













WE HAVE STANDARDIZED AV TECHNOLOGY THROUGH **OUT THE FACULTIES OF MASARYK UNIVERSITY**

2017/2018

DESIGN / PROJECT / AUTHOR **SUPERVISION**

We have made a project of the modernization of AV equipment for classrooms, training rooms, laboratories and gyms for thirteen faculties of Masaryk University in Brno. The overall content of the project hit over 270 rooms which we have supervised after authoring the project documentation.

We had focused on the replacement of the projecting elements (especially projectors focused on a laser version of the light source) during the entire upgrade. We have also modernized the signal management and the audio chains.

The presentation elements in tuiting areas are usually represented by projection screens (in the form of roller, frame and electric), by ceramic boards in the standard form and with a projection layer (to reduce reflection).

The audio chains were designed according to the purpose and size of the room, ranging from the basic sound of laptop and the small speakers on the wall, to a complex system with wireless microphones, DSP, and zone sound system.



VOLUME: Over 150 million CZK



and distribute study content, and unifies the control system. Additionally it is less likely to obsolete, it does not require complicated maintenance and it allows distant administration.



This has been the most extensive reconstruction of AV technologies in university sphere since the Velvet Revolution (1989).





The change of technologies has brought many benefits to the university.

- Our new AV technology supports teaching, enhancing e-learning capabilities to record



WE HAVE STANDARDIZED AV TECHNOLOGY THROUGH OUT THE FACULTIES OF MASARYK UNIVERSITY

2017/2018



Presentation elements in the teaching rooms are usually represented by projection screens (in the form of roller, frame and electric), by ceramic boards in a standard form or also with a projection layer (to reduce reflections).





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WE HAVE PROJECTED AV TECHNOLOGY FOR AN EXTENSIVE **RECONSTRUCTION OF THE FACULTY OF ART MUNI IN BRNO** 2017/2018

DESIGN / AUTHOR SUPERVISION

We designed the AV technology project to conceptually build on previous project for the Center for the Advancement of Research in the Liberal Arts which is a part of the Department of philosophy. Thanks to this we have supported the standardization and the unity of technology and its control, and we have not disrupted the habits of the educators who can now concentrate more on teaching.

As part of the project we were working on a lecture hall, a reading room, seminar classrooms, lecture rooms, team study rooms, a multimedia classroom with a screenplay background, a meeting room, dean's office, secretary's office, premises of the psychological institute and communication facilities of the school.

According to their purpose, we have designed a projecting and presentation technology, a ceramic board, sound system, PTZ cameras, recording units, units for wireless presentations from mobile devices and wireless microphone sets. Everything including control counters and cable routes.

The reconstructed buildings are equipped with the new information system now. At the same time the information system was modernized in other buildings.

VOLUME: CZK 25 million

We have solved the acoustic adjustments of the areas to ensure speech intelligibility and by that eliminate the risk of fatigue of listeners.









During the actual reconstruction of the buildings and the installation of AV technology, we provided author supervision to make sure all the works meet the conditions and standards that we set down for the project.







WE PARTICIPATE IN THE DEVELOPMNET OF A STUDY AREA IN THE CZECH UNIVERSITY OF LIFE SCIENCE

2018

▶ REALIZATION

Across various faculties of CULS we are installing teaching AV technologies that help the university to meet the trends of modern learning environment. We've got the ever-evolving capabilities of both data infrastructure and terminal AV elements. We are implementing these into existing systems so it leads to gradual modernization in the areas related to the training.

We are installing projecting systems, sound systems, and presentation systems for classrooms, lecture halls, meeting rooms, offices and school communication facilities.

Learning rooms are equipped with e-learning cameras for recording and streaming the lessons.

We are trying to unify AV systems and their control throughout the whole campus. Thanks to this, the operation will be much more simple.



VOLUME: CZK 25 million

The new technology enhances the comfort of teaching by making it interactive, it simplifies the distribution of teaching materials and provides a better access to online content.









The teaching areas include projection systems that combine the standard projection with the classic ceramic plates that are placed on the sliding bars.

All the technology is controlled from simple panels integrated into teachers' desks. Meeting rooms, in addition to presentation techniques, also contain modern video conferencing systems.











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SPORTS AREAS









REFERENCES / SPORTS AREAS

MULTIFUNCTIONAL SPORT FACILITIES FTVS UK

2021

DESIGN / PROJECT / REALIZATION

We have built an inflatable sports hall for Charles University students, which will serve as a year-round multifunctional sports ground. The hall is 55 meters long and 33 meters wide and can hold 3 tennis courts or one large playground, for example for basketball.

We supplied the complete construction of the hall, including the demolition of the original surface.

We also installed a surveillance camera system and a scoreboard in the hall.

We have equipped the hall with an intelligent system for user-friendly operation. Light intensity, internal temperature or reservations can be easily managed via mobile phone.

NISASPORT Elektronik



VOLUME: CZK 20 million







PRAGUE HAS A NEW HALL FOR CONCERTS AND SPORTS 2016/2019

DESIGN / PROJECT / AUTHOR SUPERVISION

We projected and designed a sound system for the sports hall of the new multifunctional O2 UNIVERSUM center with the capacity of up to 4.5 thousand people. It will serve not only for sport events, but also for organizing music concerts.

The project included both the sound system of the hall itself and the equipment of the sound control room and the technological room.

We designed a complete data infrastructure for the transmission of audio signals using the DANTE protocol throughout the building including the hall.

The technological direction room is designed so that it can be equipped as a full-fledged television workplace in the future.

In addition to sound distribution, we also designed acoustic adjustments based on accurate calculations for sound transmission of a high quality.



VOLUME (AVT IN THE WHOLE 02 OBJECT): CZK 50 million







THE VIEWERS AT THE STADIUM OF VÍTKOVICE CAN FINALLY UNDERSTAND THE REPORT

DESIGN / PROJECT / REALIZATION

For the city stadium in Ostrava-Vítkovice, we modernized the power sound system of the main grandstand, because the audience had been struggling with poor intelligibility of the reports.

We used loudspeakers and cable routes that meet the fire standards for the evacuation radio in order to incorporate the new system.

When submitting the work done, we made an acoustic measurement of both the sound pressure level and the speech clarity parameter, and both of these values came out with a sufficient reserve above the required values.

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The powerful sound system is based on the principle of the distribution sounding of the grandstands and speakers are installed in clusters of two to ensure even sounding throughout the grandstand height.



2019



VOLUME: Over 2 million CZK



HRADEC KRÁLOVÉ – AUDIO SYSTEM SUPPLY

PROJECT / IMPLEMENTATION

At the football stadium in Hradec Králové, we pushed the boundaries of sound technology for sports venues. In the newly equipped Malšovická Arena, with a capacity of 10,000 spectators, we used the latest AFMG EASE software to achieve the best results in electro-acoustic simulation, ensuring optimal speech intelligibility and perfect acoustic coverage across the entire stadium. Thanks to the careful selection and placement of JBL speakers, we exceeded the proposed expectations, including speech intelligibility (STI) and sound pressure level (SPL).

The main sound system consists of 46 speaker boxes installed around the perimeter under the roof of the stands. We equipped individual stand sectors with microphones, allowing the staff to monitor the situation and listen to specific areas. We also outfitted the commentator's workspace, providing the legendary Shure SM7 microphone, and we amplified nearby spaces.

For the cable installations, nearly 3900 meters of 2 × 4 mm speaker cable, 700 meters of microphone cable, and 600 meters of optical cable were used.





VOLUME: Over 5 million CZK



WE HAVE PROJECTED AV EQUIPMENT FOR A GYM IN A UNIVERSITY CAMPUS IN BOHUNICE

2017/2018

DESIGN / AUTHOR SUPERVISION

We have equipped the gym at the campus of Masaryk University in Bohunice with a large-area LED panel and a pair of scoreboards, including the equipment for the most frequent sports. We have also solved the revitaliza-tion of the sound system, especially the replacement of wireless microphones with antennas distribution, and power amplifiers.

The large LED panel serves as a scoreboard to inform the viewers of a match. Our solution also enables to show repetitive recordings, video editings, live broadcasts and it can be also used as a presentation viewer during the lectures.

The system includes a control software with integrated modules of the most common sports and a simple handling.

The control system is not only provided with the main PC and control panels, but also with a tablet for a wireless control.



VOLUME: CZK 4 million

Thanks to the new technology, the sports events in the gym have become more atractive, more fun and its informative function has been improved.















ADMINISTRATIVE >>>> BUILDINGS











HYUNDAI MOTORS NOŠOVICE – AUDIOVISUAL TECHNOLOGY AND CUSTOM CONTENT DELIVERY

2023

▶ IMPLEMENTATION / LIBRETTO

As part of the demanding reconstruction of the main administrative building of Hyundai Motor Manufacturing Czech s.r.o. in Nošovice, we supplied audiovisual technologies to the representative areas of the lobby and the adjacent auditorium.

The auditorium, or H.Space, was equipped with a large--format Samsung LED wall with 4K resolution. We provided sound and enhanced the space with sophisticated blended projection using two Epson projectors. Notably, independently programmable LED strips were installed around the entire room, creating a striking and unusual lighting effect, making the audience feel almost like part of the story. We also created custom content for the project, utilizing our advantage of in-house communication across all involved professions, which makes the entire process highly efficient, saving both time and money. In other words, this is a turnkey implementation.

In the showroom, we installed a large Samsung LED wall with 4K resolution, added sound, and complemented the space with 13" touch screens on stands and a touch table.



VOLUME: Over 20 million CZ













REVITALIZATION OF OFFICE SPACE OF ŠKODA AUTO a.s. / ASAL II

DESIGN / REALIZATION

In the factory of Škoda Auto a.s. in Mladá Boleslav, we participated in the revitalization of the office space in the ASAL II building. We equipped them with presenting and videoconferencing technology, sound distribution and reservation system.

Depending on the type, the meeting rooms are equipped with a data projector or large format monitors, with the possibility of wireless presentation, connection points with a backup set of digital cabling and a reservation system.

Active AV signal switches ensure optimal communication between the source of displayed data (notebook / external visualizer) and the display device.

The Logitech Group, Cisco and Logitech MeetUp video conferencing sets with external microphones enable meetings via Microsoft Skype For Business and Cisco VCF.

The control of AV equipment in the rooms is provided by pushbuttons or touch panels with individual configuration according to the client's requirements.



VOLUME: On request







"VISIONARY" ADMINISTRATIVE SPACES OF ŠKODA AUTO a.s. 2019

DESIGN / REALIZATION

The company Škoda Auto a.s. has opened a creative work-place in the new administrative "VISIONARY" complex in Prague – Holešovice, in which we equipped the meeting rooms and relaxation zones with audiovisual equipment in cooperation with the user.

Depending on the type, the meeting rooms are equipped with a data projector or large-format monitors, with the possibility of wireless presentation and a backup cabling set (in selected rooms with a login button, the so-called "Extron / Show Me Cable for TeamWork Collaboration").

Active AV signal switches ensure optimal communication between the source of displayed data (notebook / external visualizer) and the display device.

The Logitech Group and Logitech MeetUp video conferen-cing sets with external microphones enable the meetings via Microsoft Skype For Business.

The control of AV technology in the rooms is provided by button panels with the possibility of individual configuration of many operating variants.



VOLUME: On request











2019

HIERONIMUS I AND II PRESENTATION HALLS

PROJECT

In the Škoda Museum building, we modernized the AV equipment of two conference halls with the maximum capacity of 40 and 90 people.

We equipped both halls with a central projection with wireless connection and cable back-up for the speaker with several connection point variants (HDMI / DISPLAY-PORT / VISUALIZER) and a set of wireless hand-held microphones.

In addition, the larger hall has preview monitors for mirroring the content from the main projection.

In both halls, the control of the technique is solved out by simple button panels, which enable the setting of many operating variants of the space according to the user's requirements.



VOLUME: On request









ŠKODA AUTO – EQUIPPED 250 MEETING ROOMS

PROJECT / IMPLEMENTATION

In 2024, the new headquarters of ŠKODA AUTO in Mladá Boleslav was completed. For the Mladá Boleslav car manufacturer, with whom we have been collaborating for over ten years, we successfully equipped a total of 250 meeting rooms within the modern Laurin & Klement Campus this year.

We also supplied audiovisual technology to the Campus conference center, which can be divided into several segments based on the size of the auditorium needed for each event.

All deliveries were made with technological sustainability in mind for five to ten years and with a strong emphasis on environmental friendliness, including the ecological disposal of all packaging and efficient use of equipment. For example, polystyrene fillers from all the boxes were repurposed into lightweight concrete in our Home of AV facility.





VOLUME: On request

NEW CLEVERLANCE OFFICES

DESIGN / REALIZATION

In cooperation with Dimension Data, we furnished the Cleverlance meeting rooms, which had moved into the new office space of the Palmovka Open Park office complex.

We equipped the meeting rooms with projection tech-nology, sound system and presentation monitors. Some rooms, according to requirements, were equipped with videoconferences.

The assignment of the investor was to minimalize the control elements, which we supported by placing simple button panels directly in the connection points.

The office operation complements the shared hub space, in which we installed a screen with a projector and wireless connectivity via Barco ClickShare.



VOLUME: Over 1 milion CZK









NEW OFFICES OF RWS MORAVIA

2019

DESIGN / REALIZATION

In cooperation with Dimension Data, we furnished four floors of the office space of RWS Moravia, which settled down in the object of the new offices of the Vlněna park on the site of a former textile factory in the center of Brno. We also dealt with room acoustics for the whole area.

We have equipped different kinds of space with the tech-nology – meeting rooms, classroom, phone booths, can-teen and shared areas with centrally controlled content.

According to the investor's specification, we have sim-plified the connection to AV technology so that the user needed only a USB-C cable.

We equipped the meeting rooms with mini PCs for users who come to meetings without their own devices.





VOLUME: Over 5 million CZK













NEW OFFICES OF RWS MORAVIA









A tailor-made acoustic design!

Although our suppliers have beautiful patterns of acoustic tiles, this is not enough for us and we want more. We create custom-made panels with your own custom print so you can unwind and choose a design that exactly matches your most secret ideas.

So, when your wife asks you why the naked lady hangs on the wall in your office, you can reassure her: "Honey, that's an acoustic lining that protects my well-being by noise reduction, of course."

Or you can go for Mount Fuji and Golden Gate Bridge and there will be peace. As they did it in RWS Moravia.











NEW AV EQUIPMENT OF CHMI WORKPLACE

2021

REALIZATION

We installed AV technology in the premises of the new building of the CHMI central forecasting office. Part of the modernization was the equipment of the conference hall, forecast hall, recording room, server room and hydrology workplace.

In the conference hall, we installed AV technology for two modes of operation, so that it is possible to use the hall as one large unit, or to divide it by a mobile acoustic partition into two separate rooms. Therefore, the imaging technology is divided into two sets, one screen and a projector. In the same way, the sound technology, thanks to the division into zones, enables separate sounding of individual rooms.

In the main forecast hall, we installed two LCD walls to display visualizations of meteorological data and a videoconferencing unit, especially for connections with CHMI branches and workplaces of the integrated rescue system such as the Fire and Rescue Service of the Czech Republic.

We equipped the recording room with a PTZ camera and a 75" LCD. It serves as a small television studio for recording or online presentation.

We equipped other areas of the workplace with LCD displays and, above all, with an infrastructure for remote and local image data sharing. The infrastructure now enables all CHMI workplaces to have both internal communication within all CHMI branches and connections to partner networks of critical infrastructure, as well as sharing to the public Internet network.



VOLUME: CZK 10 million











NEW PRODUCTBOARD OFFICES

2020

DESIGN / REALIZATION

We have prepared an excellent technological background for the Czech branch of this fast-growing company, so that its teams can work together flexibly, efficiently and, most importantly, comfortably.

We have equipped the central social space with a large-format projection for projecting video transmissions from the parent company.

We have prepared a specific meeting room with an open infrastructure, which allows its future use for a podcast studio.

We have equipped scram points with AV technology, focus rooms and phone boots, always in the way that controlling is as simple as possible and you can only connect with a single cable with a usb-c connector



VOLUME: CZK 3 million



















2018

DIMENSION DATA GLOBAL DELIVERY CENTER HAS GOT OUR OFFICES FROM THE FUTURE

PROJECT / REALIZATION

Communication and cooperation on an international level requires flawless and intuitive AV technology. We have installed it all over the spaces. A meeting and training room, open-space offices, the main relaxation area, and other areas have now a technology which creates an inspiring working environment.

In the meeting rooms, there are compact video conference all-in-one sets Cisco with a simple way of controlling and timeless design.

A Room reservation is possible via touchscreen of LCDs connected to an internal planning system which makes it much easier to organize all meetings.

We have installed connection points for powering and distributing the AV signal into the tables and floors.



VOLUME: CZK 5 million











An information and navigation system

It's important not only to atract the attention of incoming visitors up, but also to help them navigate in the space. This is why we have installed an information and navigation system within the open office and other common areas.

In the entrance areas there are information kiosks with interactive touch screens to get the right directions.

In total 20 large monitors display the company's information system.

Flexible remote management of the screens' content is provided by Hugport system.

On the column in the middle of the room, we have installed a special triple set of large LCD monitors and speakers. We designed the layout so that the image and the sound evenly covers the entire space.





OFFICE BUILDING MSD FIVE HAS A UNIQUE **TECHNOLOGY FROM US**

DESIGN / PROJECT / REALIZATION

For MSD company we have designed and installed AV technology and room acoustics to six floors of modern office space which are equipped in the way to create an inspiring working environment.

We have placed LCD panels for video conferences and a corporate infosystem for navigating the visitors.

The meeting and working rooms have LCD touch panels, video-conference sets or an interactive projection "we-inspire" screen.

The office space was also solved from the point of view of room acoustics and equipped with acoustic screens, ceiling and wall claddings that absorb excessive noise and provide smoothness during the video conferences.

We've designed all the technology with the emphasis on simplicity of its control. Wherever it was possible we tried to use the function of an automatic switching or the possibility to switch between displayed contents. The AV technology is also connected to the corporate network and therefore enables a complex management of all the elements of the AV chains.







REFERENCES / ADMINISTRATIVE BUILDINGS

We have been taking care of the headquarters of the leading biopharmaceutical company MSD in Prague's Smíchov district since 2014. As part of the ten-year technology lifecycle, we are once again modernizing their offices, making full use of the previously installed cabling.

We design and install new technology on top of the existing infrastructure, in line with current trends and new standards, while considering the company's current communication strategy, whether it involves BYOD (Bring Your Own Device) solutions or autonomous videoconferencing.





The most interesting space is a large auditorium for corporate training and a conference with a unique presentation wall made up of 36 LCD panels, a connection point for the speaker, rotating cameras and ceiling microphones for recording and streaming in the auditorium, all connected by an affiliate direction station.

MSD Five Offices took a winning place in CBRE Boardroom of The Year 2017 competition.

2017/2024



watch the vic



WE HAVE MODERNIZED THE INFORMATION SYSTEM AT VÁCLAV HAVEL AIRPORT

2017/2018

▶ REALIZATION

Airport is a place with plenty of demanding operations where arrival and departure times, flight, gate and luggage numbers and many others are displayed on screens permanently 24 hours a day. For the imaging technology it is a great deal and thus its servitude is very easily shortened. Therefore the airport managers had decided to contact us to restorate the digital information system in order to avoid risk of failures and poor readability of the content.

Due to the modernization we have exchanged 449 monitors for new professional LCD large format monitors that are designed for business use in demanding 24/7 mode.

All the monitors were calibrated in order to have the exactly same color rendering.

We often had to deal with an atypical anchoring of the monitors so we designed and manufactured special tailor made anchor elements.



VOLUME: Over 5 million CZK







DUTY FREE SHOP AT VÁCLAV HAVEL AIRPORT PRAGUE

2021

SUBCONTRACTOR REALIZATION

We equipped one of the shops at our main airport with digital advertising banners.

We have chosen flexible LED modules for installation, which are mechanically resistant and can be used to create attractive curved surfaces.

Visitors of the store will see a digital entrance portal, a hanging advertising ring, or, for example, a unique LED cylinder that simulates the flow of beer and thus perfectly complements the Pilsner Urquell sales stand.

Content projected on digital screens can be flexibly adapted to current needs thanks to remote central administration.



VOLUME: CZK 1 million















NAVIGATION SYSTEM AT VÁCLAV HAVEL AIRPORT PRAGUE 2019/2024

REALIZATION

We installed a test version of the digital navigation system at Václav Havel Airport Prague, which could replace static navigation signs in the future.

We have chosen LCD monitors designed for 24/7 operation.

All monitors have been set up and calibrated to have the same color rendering.

To speed up the monitors, we had to manufacture a custom-made steel structure.

Digitizing the navigation system will allow you to remotely manage the content and make it look more attractive.





VOLUME: Over 2 million CZK











We have been operating at Václav Havel Airport Prague for more than ten years.

In 2024, we expanded the arrival and departure display systems with new LED panel technology, which is integrated with digital navigation and real-time information on air travel.






One of the longest studio LED walls on the Czech television market?

A complete relocation of the television headquarters station to a new building?

So, what kind of challenge have you got for us?

No problem.









BROADCAST





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LED WALLS IN THE NEW TV NOVA NEWS STUDIO

2021

▶ IMPLEMENTATION / REALIZATION

The architectural concept of the new studio put maximum emphasis on simplicity and visual purity, which we achieved through the precise installation of curved LED walls. As a result, the background behind the moderators is a continuous seamless surface without disturbing elements and so the whole studio follows current world trends.

We equipped the studio with two large curved LED walls 9.1 and 8.6 m long, eight sliding LED pillars with a total length of 3.9 m and a 108 " LED touch panel for interactive presentations.

During the preparation and installation of the technology, we proceeded in close cooperation with the architectural office Veech x Veech in order to meet their demanding requirements for accuracy of execution.

For the realization of the curved surface of the LED walls, we made our own load-bearing and fastening structures.

As part of the installation, we modernized part of the directing room with new equipment.



VOLUME: CZK 15 million







NEW STUDIO FOR TN LIVE

ONLINE NEWS

Facilities for an innovative format of news at TV Nova.



NEW ONLINE STUDIO TV NOVA

2021

REFERENCES / BROADCAST

► REALIZATION

We carried out the complete installation of the studio for continuous daily online news, TN Live. Thanks to this, TV Nova will be able to react instantly to current events and provide live reports from the field. The installation also included the equipment for the technical control room.

The studio and control room infrastructure utilize NDI technology, allowing for the transmission and reception of any video and audio signal within a data network.

We equipped the studio with a frameless LCD wall and an additional 85" LCD screen, which is mobile and can rotate vertically, allowing for flexibility in various programs.

The studio and control room were also fitted with acoustic panels based on precise calculations. Additionally, these panels form an essential visual part of the interior design.

IN LIVE



VOLUME: CZK 4 million













NEW HEADQUARTERS OF PRIMA TV & CNN

PRIMA NEWS

And we stretched out many kilometers of cabling and connected thousands of connectors.

"



NEW HEADQUARTERS OF PRIMA TV

2019

PROJECT / REALIZATION

The new headquarters of the Prima TV in Strašnice – Prague is building space for both television production and office facilities for its employees. In addition, a new studio for CNN Prima News will be created in these premises with the support of CNN International Commercial.

We are preparing project documentation of TV equipment, AV equipment and LED walls in the news studio for this event.

At the same time, we also carry out the installation of central infrastructure, LED walls in the news studio, clear out workplace, one of the channels, including appropriate directions and optical remote cabling.

Broadcast part is a combination of standard SDI technology and IT technologies.

As part of the project phase, we also calculated and proposed modifications to the spatial acoustics of the interiors of the new headquarters.



VOLUME: CZK 50 million











A SMALL STUDIO AT NOVA TV

For television broadcast and new media.





TV STUDIO WITH DIRECTION ROOM AT NOVA TV

2019

REALIZATION

At Nova TV, we designed room acoustics and installed new equipment into the video direction room, a technological stand and cabling into a small television studio which serves for smaller television events and new media.

The installation included preview monitors, one sound mixer, panels of the video direction room, camera correction panels, SDI matrix control panel, a wireless microphone receiver, an indicator of sound level and other equipment in the technological stand.





VOLUME: approx. CZK 1 million









THREE-CAMERA UHD BROADCAST VAN

PROJECT / IMPLEMENTATION

Complete technological fit-out for the VW Crafter vehicle, including vehicle delivery, installation, and configuration of visual and audio technology.

The vehicle conversion was carried out not only according to ergonomic and technological requirements but also with an emphasis on the acoustic properties of the interior space for serial operation.

The vehicle is prepared to broadcast in up to 4K@50p and is equipped with three Blackmagic Design Ursa Broadcast G2 cameras, with the option to add a fourth camera connected via a hybrid camera cable. Additional equipment in the broadcast van includes the Blackmagic Design ATEM 4ME Broadcast Studio 4K vision mixer, SSD recorders and processing from Blackmagic Design, contribution and distribution encoders from Blackmagic Design and Kiloview, Samsung and Postium monitors, Allen & Heath SQ6 audio mixing console, Sennheiser wireless microphones, external power supply including backup power, air conditioning with heating option, technical furniture, and lighting.

Also included in the delivery was a caravan serving as a base for the production crew. If needed, we can further modify the solution according to the customer's requirements.



VOLUME: Over 10 million CZK

UHD BROADCAST VAN FOR UP TO EIGHT CAMERAS

PROJECT / IMPLEMENTATION

We provided the full technological fit-out for the extended version of the VW Crafter van for the University of Opava, including installation and configuration of visual and audio technology.

The vehicle's technological fit-out includes space for up to 4 operators, including a monitor wall and a technical desk. The rear section of the vehicle is equipped with a stand for television technology, vehicle connection point, air conditioning, backup battery source, and storage space.

The vehicle is capable of operating in up to 4K@50p format, with up to eight cameras connected via fiber optics.

The van is also equipped with a vision mixer, video matrix, recording and streaming system, audio mixing console, communication devices for camera operators, and other auxiliary equipment.







2023





VOLUME: Over 3 million CZK



copyright





Customer portfolio

CONCERT AND MULTIFUNCTIONAL HALL IMPERIAL BATHS KARLOVY VARY





