Project examples that were realized with LVZ

Planning by **EPIC** Elektroplanung GmbH Erfurt

EPIC

Building complex 'Frankfurter Welle', Frankfurt / M   Gutenberg-Gymnasium Erfurt, compl. renovation   St. Mary's Cathedral in Erfurt, lighting + acoustics

Planning by rbb-Berlin - headed by Ms. Burczynski - 030-9799342103   **rbb**   BROADCASTING BERLIN-BRANDENBURG

Administration building DOW in Potsdam   House of Broadcast (HDR) in Berlin   Film studios in Babelsberg, formerly DEFA

ARD Berlin Capital Studio - Cable and space management for all rbb properties   Berlin TV Center (FSZ)

Planning by Dresdner Ökotherm GmbH - Mr. Bauer - 0351-85316-33   **INNIUS** INNIUS DÖ   Dresdner Ökotherm GmbH

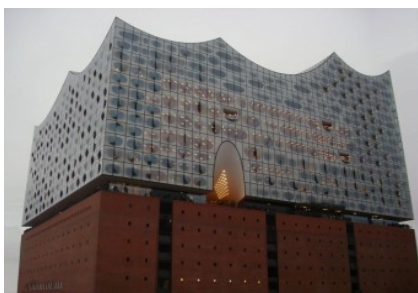Moritzburg Castle - complete renovation   Weissenfels Castle   Radebeul rescue center - new fire station
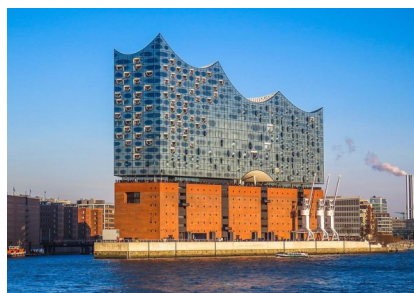
Planning by engineering company Bannert mbH Bremen - Mr. Reiter - 0 4 2 1 - 5 3 7 4 6 - 3 3   **IB** INGENIEURGESELLSCHAFT BANNERT mbH
Ingenieure & Generalplaner für Technische Ausrüstung

Elbphilharmonie Hamburg, photo IBS   Elbphilharmonie, photo Hackercatxxy (Wikipedia)   Elbphilharmonie, Alexander Svensson (Wikipedia)

LVZ ElektroCAD

**Complete electrical planning software for
AutoCAD®, Bricscad™ and ZWCAD**

LVZ is different.

It starts with the presentation of these information sheets. We want to inform you. Therefore the pages are rich. That's why the font is so small. You can find meaningless, colorful brochures with empty phrases on high glossy paper in your mailboxes or on the Internet every day.

It is about software that should accompany you for many years of your professional activity. Therefore you should read facts and no phrases. Simply skim through the brochure to get a small overview. If you then take 10 minutes each day to read one page at a time, you understand that with LVZ you are not buying off-the-shelf software, but a product that rises up with the experience of daily work in the electrical planning office and has arisen with the requirements of our users.

LVZ is a complete solution for electrical planning that does not require constant and expensive purchases of expansion modules.

No software theorists with no practical relevance work here, but electrical planners with in-depth knowledge in software development.

We are not box pushers who deliver a CD cash on delivery. We see ourselves as partners of our clients and offer support at any time - usually even free of charge. We learn from user requests and expand our product according to practical requirements. So we are often recommended by satisfied LVZ users.

LVZ was created in 1988 as a pure calculation solution, hence the strange name. From 1993 on AutoCAD® became the base for CAD with technical calculations, a symbol library and a lot tools - the today's focus.

Bricscad™ is available as an inexpensive (€ 600) and fully compatible alternative to AutoCAD® (from € 2,000 per year). In contrast to AutoCAD®, Bricscad™ offers accessible and competent support. LVZ is running also without problem with ZWCAD (from 580 €).

The weaknesses and problems of the software solution from the state capital of Hesse used since 1991were known. So the goal was to replace them in the electrical planning office with LVZ. It quickly became apparent that it was not an illusion to replace an established product with your own developments. Already in 1994 LVZ sold for the first time. The user at that time is still working successfully with our product in the now current form.

LVZ has been our main product since 1997.

LVZ project examples …

Döbeln detached house - probably the smallest LVZ project

Fleischwaren GmbH Döbeln - the 1st LVZ project in 1993

LVZ ElektroCAD

IBS Döbeln - Software development engineers

Electrical planning software for AutoCAD® and Bricscad™ and ZWCAD

Bricscad -- Registered Developer

Comprehensive computer support for electrical planning from design to installation and Overview circuit diagrams including technical calculations for the finished specification

The software presented is an AutoCAD® application that was and is developed by electrical planning engineers for planners. Great emphasis was placed on practical processes, calculations and tools. The result is a tool for a wide range of applications, from design to the finished course with the transfer of data to FM software.

Users are electrical engineers and technical draftsmen. Both work in parallel in technical calculations, graphic representations or evaluations in the same drawings.

The program is suitable for both design and detailed planning.

All important work steps can be carried out variably. In this way, cables already drawn in the plan can be calculated later or a purely arithmetic cable dimensioning can be carried out without displaying cables in CAD. The same applies to working with symbols, 4,500 of which are included. These can be set in the draft and later labeled and evaluated in the planning. Once all the data are available, they can also be inserted immediately as intelligent symbols and provided with technical or commercial information.

All the necessary evaluations such as cable lists, room lists, lighting lists, calculation records, the room book and the complete list of services can be derived from the stored symbols and calculation results. The evaluations are compatible with Word and Excel.

Calculation results can be automatically displayed in CAD as a technical drawing. Existing AVA solutions including all existing user data can be used for the room book and LV. LVZ provides an intelligent interface for import and export.

BRIEF OVERVIEW

- Transfer of paper drawings in 3D
- Installation plans, overview circuit diagrams
- Line plans, KNX plans, contact plans
- Escape route and fire brigade plans
- Breakthrough plans
- Line dimensioning with fire loads
- mass determination including cables
- Short parts list, room book and complete course
- Short circuit detection, switch-off conditions
- Voltage drop with inductive components
- Proof of selectivity, lighting calculation.
- Cable dimensioning, earthing systems
- Evidence of economic viability
- Calculation of large-scale solar systems
- Fee calculation
- Data transfer to FM software
- Symbol library, 4,500 intelligent blocks
- Building module for walls, doors, stairs
- Attribute management, import and export
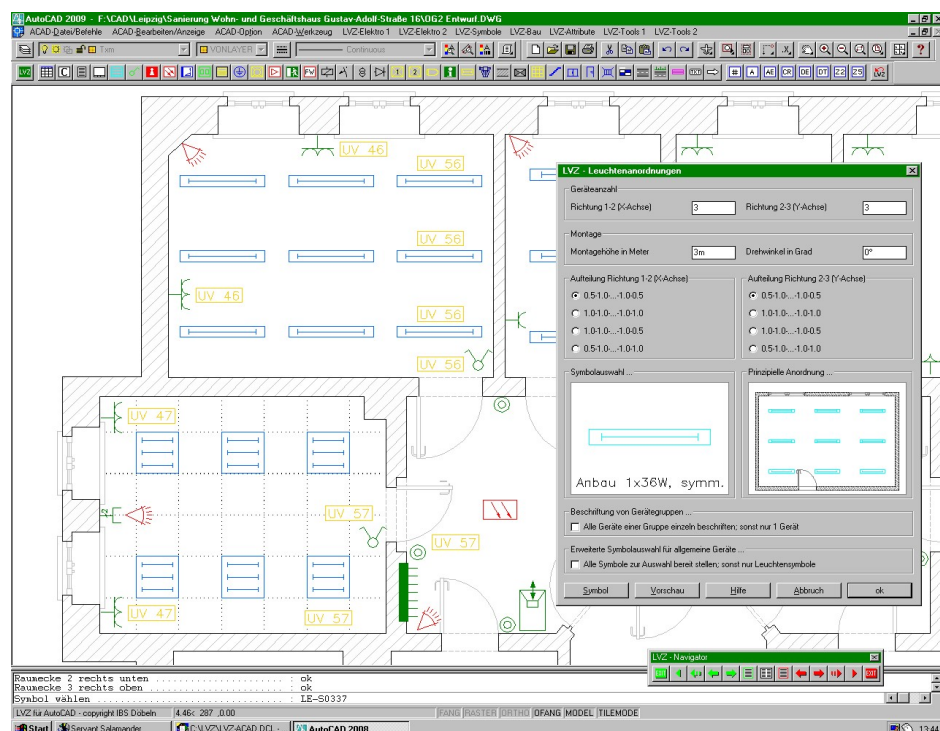- Tools and batch commands for drawing work

INFORMATION

Programm	LVZ ElectroCAD
Funktion	Complete solution for the Electrical design
Leistungen	Delivery and installation, additional instruction solution, training, service and free hotline, remote maintenance
Adresse	IBS Döbeln Lerchenweg 28 - 04720 Döbeln Telephone +49 (0)3431-574153 eMail Service@IBSDL.de Internet www.IBSDL.de

Also possible in both directions is the product-neutral data exchange with FM programs. With DIALux and RELUX there are internal lighting calculate two more interfaces, identify the LVZ as an open system to draw. LVZ is also open to own symbols that change quickly and have it integrated easily, no matter if it is finished blocks or individual self-drawn CAD objects. According to user request, all properties such as layer, size factor, attributes and labeling are adjusted.

In addition to the technical functions, the range of features of AutoCAD® is expanded with many tools for attribute processing, construction and manipulation of CAD objects, because - this is often overlooked - it includes evaluations, calculations and automatize a variety of simple but timeconsuming drawing tasks for everyday CAD work.
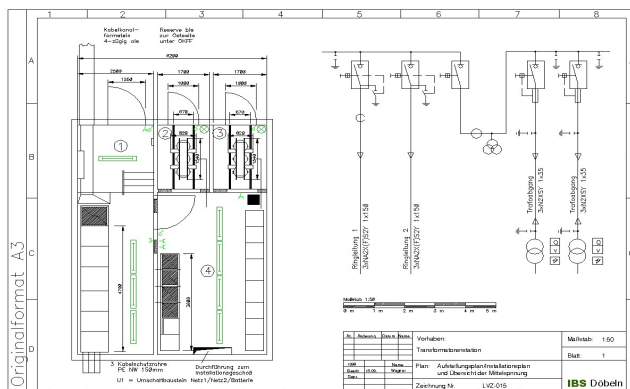
LVZ drawings can be created using pure AutoCAD®, e.g. continue processing at another planning office and then use it again under LVZ without loss of data.

Copy of technical paper AUTOCAD® Magazin

LVZ ElektroCAD

Electrical planning software for AutoCAD ® and Bricscad ™ and ZWCAD

IBS Döbeln - Software development engineers

Bricscad -- Registered Developer

- LVZ as an AutoCAD® application automates the creation of drawings and increases the information content.
- The goal is the almost complete creation of an electrical project including CAD drawings, technical and commercial calculations up to the complete list of services and the fee calculation

- Includes GAEB interface 81-86 for export and import, which works with any GAEB-enabled program

- All data are stored in an easily editable text format

- All technical calculations can be installed as user programs under LVZ
- User-specific article master data are converted and adopted
- Symbols of the user can still be used under LVZ

- Material evaluations for one or more drawings in total or by distributor or by room

- Drawn or automatically constructed
- Installation plans
- General circuit diagrams
- Contact plans for relay controls
- Escape, escape route and fire service plans
- Plans for information, antenna technology and Instabus
- Line plans for bus technology, ELA, EMA, BMA, ...
- as well as any schemes

- generated or automatically built

- Cable lists, luminaire lists, room lists, radiator lists
- Material lists, parts lists up to the complete LV
- Label lists of any devices
- User-definable evaluations that can be imported back into the drawing (s) after changes
- Lists of any calculation results
- Complete LV
- complete room book
- Cost calculation according to DIN 276 as well as freely definable
- Fee calculation according to HOAI

- It includes tables on illuminance levels, nominal motor currents, transformer data, cable data ... etc. as well as diagrams for amortization, operating life, fuse curves of fuses, etc.

- Integrated proof of zeroing, short-circuit calculation, voltage drop, power calculation for distributors or circuits, determination of space units for distributors, transformer losses, illuminance, amortization, reductions in cables, line losses, fire loads, cooling loads, load flow calculation, motor start-up and evidence for compensation systems, earthing systems, cable dimensioning

- automatic labeling - doors, stairs, windows, radiators ... as mathematical models that adapt in shape and size to the needs

- The LV is created completely automatically from the drawings - all data including the calculation results are saved in the drawings and can also be further processed in pure CAD locations without LVZ

- All stored data can be exported to FM programs

- The digitization of architectural plans is supported with routines for drawing walls, doors and stairs, which are stored as mathematical models and automatically adapt to size and shape as required; the part can be detached and used neutral

- It goes without saying that there is an extensive symbol library which, in addition to the required electrical engineering symbols, also contains furniture, sanitary parts, etc., around 4,500 blocks
- The symbols supplied include dimensions, so that luminaires with lamps or installation devices are always written out with sockets / terminals
- Editing functions are cross-drawing
- The labeling of symbols takes place automatically and with space optimization, so that the labeling does not cover any parts of the drawing - all referenced dimensions including the cable lengths are automatically included in the complete parts list and can be shown in the drawing as a short parts list - overview circuit diagrams are automatically and at the same time generated with the creation of the installation plans. With parallel work, the user is not necessarily subject to the automatic process.

- The generated overview circuit diagram contains voltage drops and cable lengths, which are automatically calculated from the existing cable lengths
- The switch-off conditions are verified automatically - Overview circuit diagrams are created with 1 or 3 poles

- Each cable receives 44 attributes that can be viewed, edited or automatically Creation of the cable list can be used
- for any route section, the route allocation including the minimum route cross-section, the fire load (VDE 0108) in the route, the power loss and the weight can be displayed - the above information can be inserted into the drawing or incorporated into the project text become

- Cable routes including vertical branches are represented with 2 independent mathematical models; just draw the guideline

- Road command for drawing any parallel curves
- all commands for which a 3D display is useful can be used in space without the need for additional inputs; there are also standards (of course adaptable in the command) for the required heights. To be drawn spatially

- Hatched walls, windows, doors and stairs
- Symbols such as lights, furniture, appliances, sanitary
- Cable routes, slots, openings
- Cables and lines laid with or without a route

- The program is user-configurable and can easily be expanded with tables, symbols, texts, data for cables, lamps, transformers

- for AutoCAD® 2007-2020, Bricscad™ V13-V20, ZWCAD

- Interfaces DXF, DWG, DataNorm, ASCII, GAEB, C.A.T.S., dBase, EldaNorm, Excel, ANSI, AVAnce, FAME, KNX, liNear, IFC, FM and for light calculation DIALux and RELUX

- Supplied with an AVA database as an example with electronic items that can be expanded indefinitely and the symbol library with currently. 4,500 symbols, recognized vortexes and sample drawings

- The program system can be purchased in individual components and is available in full configuration for € 4,700. Multiple license discount is granted. Price applies including installation and brief instructions

- Training and instructions are also offered - we also install and maintain AutoCAD® and Bricscad ™

- hotline telephone, e-mail unlimited free of charge

LVZ ElektroCAD

Quick Overview

Bricscad -- Registered Developer

LVZ Elektro-CAD is a compete application for Elt planning engineers, on AutoCAD®, Bricscad™und ZWCAD.

The program offers end-to-end computer support for electrical planning from design to installation and overview circuit diagrams with technical calculations and evaluations to the finished specification and fee calculation.

The program is structured systematically, easy to use, open to extensions of the user and to other programs. It consists of one casting without the purchase of external services.
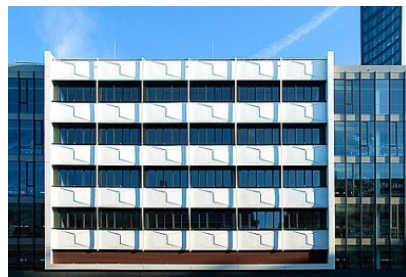
The user has his head clear for engineering decisions. The program does the routine work.

- Transfer of paper drawings in 2D and 3D, source PDF, GIF, TIFF, PNG and others. - Target DWG, DXF, IFC
- normal installation and schemes in 2D and of course 3D again based on DWG
- Complete multi-storey 3D building model for cross-level cabling and installation
- Cuts automatically including complete wall views with installation devices in 3D
- Installation plans, overview circuit diagrams
- Line plans, KNX plans, contact plans, escape route and fire brigade plans
- Route plans, breakthrough plans, automatic breakthroughs, checking of routes and breakthroughs
- Line dimensioning with fire loads, occupancy, line cuts, collision check
- Mass determination including breakthroughs, cables and bulkheads up to complete LV
- Short parts list automatically without any additional work step
- automatic legends with number of pieces up to the complete room book
- Proof of selectivity fully graphically
- Short-circuit detection (1-pin, 3-pin, thermal, dynamic, output as DWG)
- Switch-off conditions, load flow calculations
- Voltage drop with inductive components and consideration of cable temperatures in fire compartments
- Lighting calculation internally according to LiTG, DIALux interface including isolux curves and RELUX interface
- Cable dimensioning, earthing systems
- Proof of economic viability in CAD, fee calculation according to HOAI
- Calculation of large-scale solar systems
- Data transfer to FM software, interface freely configurable
- Symbol library, 4,500 intelligent blocks with 24 to 100 attributes - you can easily create your own blocks
- Foreign blocks can be equipped with LVZ properties and handled in exactly the same way as internal symbols
- 3D building module for all floors, for walls, doors, windows, stairs, rooms; Elt symbols automatically correct in height
- Attribute manipulation just as easy as if it were text for individual and unlimited groups at the same time
- Attribute management, import and export - list generation and updating of the drawing
- Stack commands, the manipulations of which, for example. affect all drawings of a project
- Creation of any lists f. Luminaires, cables, KNX components, security technology, circuits, breakthroughs, ...
- powerful tools for drawing work because a large part of the planning work consists of changes!

- all data sets are in plain text and can be expanded by users
- all functions except electrical engineering calculations can be used across trades
- all data and program parts are network-compatible
- all data are company-neutral and can be expanded by the user (symbols, tables, selectivity curves, ...)
- Interfaces IFC2x3, Excel CSV and XLS, elco, GAEB, ASCII, Datanorm, ZVEH, DWF, DXF and many more.
- all electrical data and commercial values can be exported for BIM

- no commercial restrictions such as limitation of the drawing size, the number of symbols or the Sheets of circuit diagrams
- runs under Windows XP ... Windows 10, AutoCAD ® 2007-2020, Bricscad ™ V13-V20, ZWCAD 2019-2020

- portable version available - plug & work without installation and configuration on every 08/15 computer worldwide

- Remote maintenance available for briefings, coaching, troubleshooting etc.

- Hotline 365 days a year from 8:00 a.m. to 8:00 p.m. - on weekdays free of charge until 6:00 p.m.

LVZ project examples - BRENDEL INGENIEURE, Hermannstraße 2, 01219 Dresden, Information Karl-Heinz-Lohse 0351-2712714

Hospital Dresden-Friedrichstadt, Investment 17 Mio. €

Universität Leipzig, Campus Augustusplatz

TU Chemnitz, Adolf-Ferdinand-Weinhold-Bau

- **no defined project structure** or administration necessary, no bureaucracy; the user uses his previous organizational shape such as the names of files or the structure of its directories / folders and the known network structures

- **no dependency on the Windows registry** - all LVZ configuration data are global in plain text in the initialization file secured; a simple copy of all files is sufficient for backup or setting up LVZ on another computer; the The program is immediately executable; the usual practice of storing all user data in the registry with all the known ones disadvantages are not applied

- **no external database required;** all technical information including calculation results are in the drawing; from this it follows that every LVZ drawing can also be processed under pure AutoCAD® without subsequent processing under LVZ causing problems or data loss; for example. If symbols, cables or routes have been deleted in AutoCAD® only, these will automatically disappear from the list of services automatically created below under LVZ; conversely, the LV quantities increase when new elements have been created or existing ones have been copied under AutoCAD®

- **no additional data structures besides the drawings necessary** - lists and tables up to the complete specification can be derived from the drawings; however, they are always only the result of the CAD work; The key point is always the drawing; in the event of changes in the drawings, these lists are simply re-created by the associated evaluation commands and do not have to be maintained in parallel

- **no special objects (proxies) that can only be read under LVZ and not under pure AutoCAD®**; the exchange of drawings between different trades and different AutoCAD® versions is possible without any problems

- **no practical over-automation and no show commands** that can only be used in prepared sample projects; there are no commands that are processed automatically, but in practical use they require more preparatory work before starting the command than they save time afterwards due to the automatic system

- **no restriction to the current AutoCAD® version**; AutoCAD® from 2007, Bricscad ™ from V13, ZWCAD 19, 20 are supported

- **no additional costs hidden in the software**; no decoy offers are made, which advertise with small entry-level prices, however, require additional purchases of modules after a short familiarization

- **no classification of users according to postcodes**, customer numbers or service contracts - every user is known to the assigned **IBS** employee (often even personally through training, for example) and, with some exceptions, is always assigned to the same processor from the time the software is presented to the hotline looked after in chub; there are no long questions

- **no costs for telephone hotline**; Information by phone or e-mail is unlimited free of charge, no matter how often a user needs it and regardless of whether calls are made during training or after years; Support is also given for pure AutoCAD® commands; the hotline is operated by software developers and not only by trained third parties

- **all** information at a glance - instead of small, playful dialogues with sub-dialogs from which you can only get drop-by-drop information and at the latest in the 3rd dialog forget which inputs are in the 1st dialog, large dialog fields are provided for the technician; Input values and results are always together; This makes comparisons of variants easy to do

- **all** changed configuration data and all saved files are displayed - the software is transparent and the user knows what he is doing and where which data is being saved; no opaque automatisms

- **all** symbol libraries can be easily expanded by the user and own symbols can be used immediately; clear symbol management without size limitation; User-specific symbols are managed separately and are therefore update-safe

- **all** external data such as tables, data lists such as Cable data, configuration files, menus, dialogs and the AVA texts are in plain text and can be supplemented and adapted with a normal text editor without special previous knowledge; for example. You do not have to add the required special cables depending on the software manufacturer; everyone can add these data sets themselves; SQL or ODBC databases, with which other providers adorn themselves and which are out of the question because of their complexity and the high additional license costs, are not necessary under LVZ

- **all** first licenses are installed at the user and demonstrated within 1 working day, installation problems with technical questions are avoided and the training period is shortened (exception: licenses at special prices)

- **all** symbols are constructed exactly; Details are shown ´lovingly´ - no sloppy mass work

- **all** commands are easy to learn and can be used practically sensibly; The value of CAD software is not measured according to the advertising-effective calculations or constructions that you need once a month, but in the multitude of tools, evaluations and drawing tools that are necessary every day, but are not supplied by AutoCAD® or other applications

- **all** user requests that are realizable and technically sensible are included in the program

- **fast** - where others are still busy defining the project, LVZ already has finished results

- **systematic** - LVZ consists of uniform components as if they were cast in one piece, and not from modules that were stuck together

LVZ project example - "Frankfurter Welle" residential and commercial complex in Frankfurt / aM - usable area 100,000 m² (EPIC GmbH)

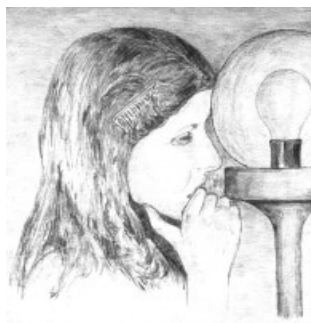
View from Mainzer Landstraße

View of the pedestrian zone

Nightview

- average, 20% of the time is saved when working on a project and this is known to be the most expensive in the engineering office!
- routine errors are minimized - planning security increases
- the result of the work - the quality - increases
- the reputation for the proper planning performance improves
- less rework - less time required for constant changes
- faster reaction to new demands from the AG and the market
- simple step-by-step planning - the design can be expanded to the planning - an already well-thought-out planning can serve as a draft or study without giving up "too much" information
- with the basic principle of LVZ, to keep all project information in the drawings, there is no need to work in parallel with lists, external graphics, etc .; these are generated automatically from the drawing and do not have to be maintained twice
- quantities and masses can be determined automatically and without any errors after each project change - this results in one security in price offers from the draft to the finished course
- all lists and overviews previously created by hand, such as route cuts, cable lists, lighting lists, ..., parts lists, price lists, messenger, bills of quantities can be generated automatically and can be recreated automatically when the drawing is changed thus always up to date and free of contradictions to the drawings
- intelligent symbols with connection to AVA, IFC, CAFM and technical calculations - interfaces to CATS and liNear!
- constant prices for product and support since 1993 - no user has ever received a price increase compared to their contract
- the software is set up and configured by the **IBS Döbeln** at the user - the user is immediately ready to work
- logically thought out software concept, developed by practitioners together with planning offices from Heidelberg, Erfurt and Döbeln
- short training period, supported by a training day included in the package and the unlimited free hotline

LVZ is programmed in Saxony
and is known for user
requirements flow in
and user-specific modules
are programmable; let it be
also user-specific
Solve problems as usual
no other software.

If you have any problems:

There is always a direct line
to the program developers.

On the right you can see a section with company-specific command sentences that are requested by the user - sometimes for a very special target project - have been programmed.

AutoCAD ® alone is **nothing more** than an **extremely expensive drawing program** ; only with a specialist application can you ...

- Work effectively and automate evaluations and the change service
- Integrate calculations and automatically generate schemas including the graphic result output
- work with large and clear technical dialogues
- Deliver, modify and evaluate technical and commercial data effectively in accordance with FM
- Generate quantity lists, cable lists, label lists, lighting lists, any order lists, etc.
- Manipulate attributes of any criteria, export them, edit them externally, **import them** again and thus update the drawing
- work **engineering** by breaking the traditional separation of engineer and draftsman and calculations, construction and draws simultaneously or alternately using the same software
- Generate complete specifications or room books from all project drawings with a single command
- Manage rooms, areas and any cataloged or inventoried items
- Insert and edit symbols and, of course, automatically exchange them, including their attribute assignment
- Use extensive tools to simplify the work under AutoCAD ®

- Use the ability of the **IBS bureau** to program or adapt almost any required command

- the extensive and competent support - because there is no support under the pure AutoCAD ® - Autodesk does not need this and the dealer has neither the necessary qualifications nor the financial scope

LVZ project examples - schools in Erfurt and Weimar - planning by **EPIC** Elektroplanung GmbH Erfurt - Mr. Sturm - 0361-2202114

State vocational school 7 in Erfurt

Gutenberg high school in Erfurt

University of Music "Franz Liszt" in Weimar

- **the software requires some familiarization** - unfortunately correct - those who shy away from it have to "work" with MS Paint ® ; every new step in life is associated with learning; no one could write or drive a car from birth; we had to invest time for everything; however, good software quickly saves the time invested at the beginning and a training day is included in the price.
- The familiarization effort in LVZ is not excessive. Part of setting our symbols and assigning attributes no long introduction. As soon as our symbols have been used, a mass determination / parts list can be generated without any additional input. The technical calculations are also self-explanatory.
- lot is done in 14 days to recognize the interaction of all components. Despite this, even after 2 years of finding orders that rationalize everyday work.

- **in the moment there is a lot of project pressure** - can't you introduce new software? - you can - and you have to - how you want yourself otherwise provide relief? - how did the pressure come about? - because a large order has been placed or because you have been ineffective for a long time has worked? - If you are afraid of the risk, you will be able to work with old resources properly and poorly with a lot of additional effort.
- We know many examples from our practice, in which companies jump into the cold water with the start of an extensive one planning used LVZ and significantly reduced the planning effort or made planning possible in the first place. It is not a contradiction to start with LVZ when printing a project, but the best measure to reduce the pressure.

- **The software has its price** - right - it does a lot of work - despite that, it is cheaper than standard packages or individual services that quickly become expensive overall and usually do not harmonize - for a complete CAD / CAE for € 1,995 expected to be remembered by John Ruskin, who formulated the "Law of Economy" well before 1900.
- Our package price includes symbols, technical calculations, various schemes and types of plans as well as the hotline and Installation day included on site. It is worth reading the price list carefully. It is a total service and not a I sent the zero service CD. Even a manual is provided. This is no longer common today.
- What is the most expensive in the planning office? It's working time. This is exactly where LVZ comes in. Time is used effectively. It is natural illusion that LVZ brings you home 2 hours earlier every day. The effectiveness lies in the accuracy of the planning avoiding routine mistakes and being able to handle the ever increasing demands.
- If you want to save money in the office, you have other options: stop energy waste, avoid nonsensical advertising materials, represent rethink sentation; check your own fleet; change the tax advisor. Anyone who saves on good software tries to put nails in a wall without wanting to buy a hammer.
- Usually AutoCAD ® already exists. It was bought because it is known and you took all the upgrades with you. AutoCAD ® Without the right industry software, it's the most expensive painting program in the world - nothing more - it's burned money.

- **We have always done it this way** - we do not need anything new - have heard it 100 times - nobody should say this; an Engineer may not say this - the job of an engineer is not to understand the same actions forever but in planning, developing and improving what already exists (this does not exclude mistakes) - otherwise we would all still sitting in the cave with the hand ax and waiting for the next thunderstorm, so that a fire may start again by accident ...
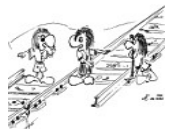
- **Fear of layoffs** - unfounded - since 1993, since the LVZ was founded, no case has come to our attention, that a draftsman was "rationalized away" by LVZ - the work is no less with LVZ - however more constructive and less monotonous because in addition to the standard commands, the simplification of the drawing activity through tools, scripts and macros, some of which were programmed to be user and order-oriented, was thought. Drawers are thus relieved of eternally the same routines that were previously manual work. These tools are missing from other applications we are familiar with.
- A good office does not fire employees when the tools and methods improve, but when comes more orders.

- **LV-what?** - LVZ, never heard of - everything easy to explain - we know that excessive advertising only annoys us know what it costs. We think carefully about the means by which we advertise and at which trade fair we do are present. The end user and therefore you pay for the advertising!
- Our advertising is the Internet, are authorized AutoCAD ® dealers and meanwhile many satisfied users, who recommend us to others. This is the cheapest and most trustworthy form of advertising.

- **Free hotline, available at any time** - no one believes this - you already have too many promises heard of this kind? - Quite simply: A good hotline is the best user loyalty. Because everyone makes sense If the user wishes is implemented, the contact to the user also serves to further develop the software.
- The hotline - optionally also remote maintenance - is operated directly by the developers, without any tune on hold. We do not have a band with the announcement "... you call outside of our business hours ...".

- **Will the IBS Döbeln still exist tomorrow?** - We have heard the question many times since 1993 - mostly from offices that exist today are no longer on the market themselves, perhaps also because they have not bought an LVZ.
- Our office is debt-free and has been working without loans since it was founded. There is no water head and none bureaucracy. Our team consists of engineers whose actions are based on the technical development of the product and is not primarily aimed at short-sighted commerce. We listen to our users in practice - so that you never feel like the figures on the right.

LVZ project examples - Deutsche Bank Frankfurt / Main - planning by **EPIC** Elektroplanung GmbH Erfurt - Mr. Sturm - 0361-2202114

Complete planning of the IT cabling of Deutsche Bank as part of 'project blue', the energy-efficient refurbishment of the two bank towers and the base

Portable Software - a new trend ?

As **Portable software** or Stickware refers to software which without prior installation runs and ideally by no leaves traces on the host system (e.g. in the registry , in the user profile). Typically, portable software is therefore also mainly used together with any removable media . You can carry the removable media with you and you can start portable software on another PC from the removable medium.

The need for specially designed portable software arises from the fact that today there are PCs almost everywhere, but you don't find your own work environment there.

In addition, there is a desire and necessity to change the settings, personal data, etc. of installed applications. also on the way to have available. Unfortunately, many developers have a philosophy of using a program on different computers contrary.

Architecture-related peculiarities also play a role. Almost all Windows-compatible programs save their configuration data in the windows-specific, central registration database specially provided for this purpose. However, this cannot be without be copied between different computers and is often not documented. To make matters worse, the scattered storage of program data in several system directories (profile, personal settings, personal bookmarks, Windows \ System32). In order to achieve real portability , programs have to be structured in such a way that they contain all the necessary data as save files in an adjustable folder that is on the transportable medium. [Source www.wikipedia.org]
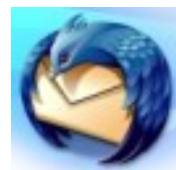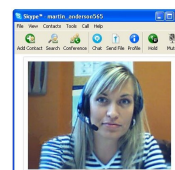
| Portable FireFox | Portable VLC Player | Portable Open Office | Portab. Thunderbird | Portable Skype | LVZ for AutoCAD® professional |

To put it briefly and a little harder, one can say: The experienced user is simply fed up with it

- **to save the entire drive C:** in an **image** only because all configuration data is scattered over the hard disk and even for freaks are undetectable - Note: Backups only help with user data!
- **to invest in time and nerves on an installation** that is not necessary
- **to have to uninstall programs**, where deleting should be enough to find that there is no uninstall under Windows restores the system - clear: which programmer is wasting time on a proper deinstallation - which, due to the system, can never work perfectly under Windows
- **Start from scratch** with every new installation of a crashed software
- endure **software linkages** in "common files" and system DLLs that occur when uninstalling or updating software A also shut down program systems B and C
- **only have part of the configuration** or user data available when working on several computers
- when changing hardware - in the simplest case a new hard disk - not just the software for the x. times to set up again (where one copy should be enough), but **have to start all over again** during **configuration**

LVZ for AutoCAD ® professional - again ahead of the trend!

LVZ is not aware of these disadvantages. The installation of LVZ is really just a copy. Every LVZ copy from computer A can be saved on the computer B can run in another folder immediately and <u>without</u> further adjustment. All configuration data are also copied. There are only one program directory with all data. There is no interference with Windows or AutoCAD ® / Bricscad ™ / ZWCAD. It doesn't have to be downloaded any Windows component, no installer and nothing needs to be downloaded from www.shit de. LVZ runs on every computer.

In addition to the download version, there is a USB version for a small surcharge. Of course, this also runs on the SD card from the photo apparatus or an external hard drive.

These properties, which LVZ has had since its birth under DOS in 1988, have been consistently maintained under Windows.

LVZ is not programmed by theorists. Here practitioners work in constant dialogue with users. The **IBS Döbeln** remains true to the principle of delivering practical solutions and keeping up with the times - or, in a specific case - getting ahead of the trend.

If you have the choice between portable and 'classic' solution, you choose the portable version, for *LVZ for AutoCAD®.*

LVZ project examples - castles , schools and museums - planning by INNIUS / Dresdner Ökotherm GmbH - Mr. Bauer - 0351-85316-33

| Moritzburg Castle, technical supply and disposal | Kreuz-Gymnasium Dresden | Art museum former Cottbus diesel power station |