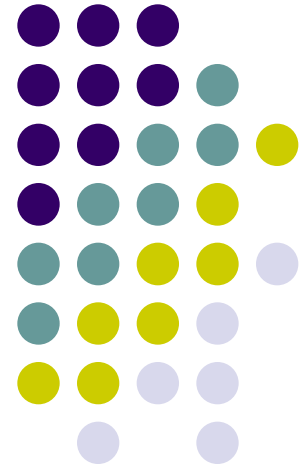


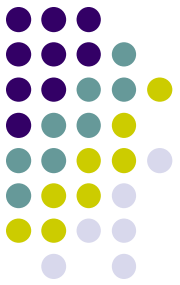
CABLE PROJECT USA

# Cable Project CAD USA

## Computer-Aided Network Cabling Design

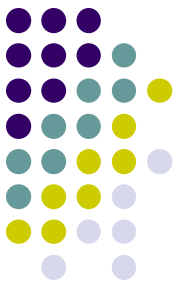
Cable Project USA





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- **4. Terms and conditions, service and other options**
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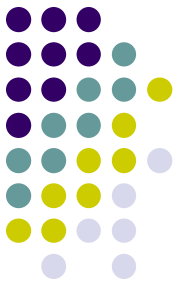


# 1. Overview

The purpose of Cable Project CAD is to automate design of installations and distribution of Network Cable Systems.

Cable Project CAD enables automation of all Network cabling designs. It contains an extended and updated component library, which includes not only a general data classification, but also design characteristics for all products. This helps to control the assembly and automation of connecting all project details as specified by the vendor.

The design of the software enables real time visual development of all projects while creating all report documentation automatically.



## 1.1. Overview: inputting data and tools

For project development in Cable Project CAD, the following inputs are required:

**Floor plans**

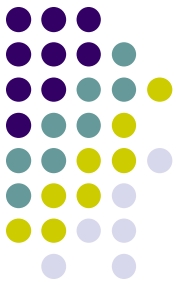
**Customer designated work area placement specifics**

**data ports, conduit and cable routes, racks, etc.**

**Customer designated network cabling design technology LAN Category, structure of channels between racks, telephone and electrical network specifics, etc.**

**Customer designated equipment vendors, selected equipment brand and models.**

The list above may include other installation specifics.

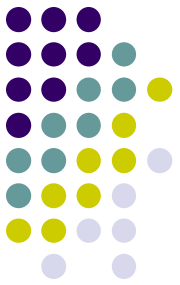


## 1.1. Overview: inputting data and tools

Inputting data in Cable Project CAD:

### Floor plans

- *Design in Cable Project CAD using drawing primitives (lines, circles, etc.)*
- *Design in Cable Project CAD using standard architectural blocks;*
- *Import from other CAD systems through \*.dxf, \*.wmf \*.dwg files or using clipboard;*
- *Import scanned plans, using \*.bmp file or standard clipboard.*



## 1.1. Overview: inputting data and tools

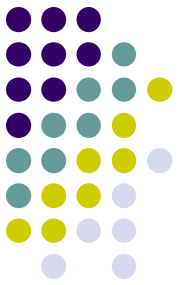
Inputting data in CableProject CAD:

### **Placement of ports, racks and conduits.**

*This is accomplished by using standard stock units and assemblies which are represented in the component library. It is also possible to create user defined equipment and to also change standard components.*

### **Network cabling design technology and specific equipment selection**

*Just as in floor configuration, the designer has the ability to select and create the assemblies in the component library. Changes in equipment can be implemented during any phase of the design.*

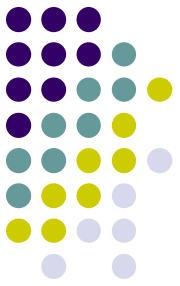


## 1.2. Design output

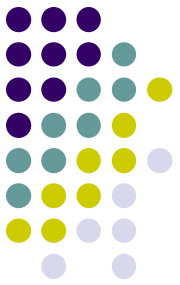
The design output reports are automatically generated plans and reports as follows:

1. **Rack design plan**
2. **Building plan**
3. **Explanatory notes**
4. **Specifications**
5. **Specifications (by GOST 21.110-95)**
6. **Wiring lists (three types, incl. extended)**
7. **Bill of materials**
8. **Task list**
9. **Cable list**
10. **Conduit list**
11. **Legend**

## 1.3. User benefits

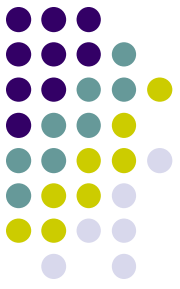


- **Complex approach:** Full automation of the processes of Network Cabling designing and estimation. Designing and parameterization will enable rapid project development, fundamentally improve the quality of current projects, control installations and implementations, performing economic analysis and better enable the selection of equipment.
- **Unique features:** No other system contains the complete range of capabilities to design, analyze, price and plan the installation of Structured Cable Systems.
- **Usability:** Intuitive interface, the use of standard templates, wizards and ready-to-use examples. No requirement for additional study by the design professionals.
- **Compatibility:** The capability of using already prepared designs, plans and drafts, created in other CAD software. Compatible with different CAD/CAM formats (\*.dxf, \*.dwg, \*.wmf, etc.).
- **Update services:** Timely component database updates including prices and other characteristics.



## 1.3. User benefits

- **Engineering serviceability:** Convenient design and presentation of Structured Cable Systems as a separate infrastructure.
- **Database:** Extensive database of elements for all major vendors (R&M, Panduit, AMP, RIT, Molex, CONNEX, etc.) including prices.
- **Rapid design:** Parametrical design will enable the use of prepared projects as templates. The capability of configuring assemblies (blocks of outlets, cross-panels, control cabinets, etc.) for use in other projects. Automatic tagging of assemblies and areas of Network Cabling in accordance with the chosen template.
- **Error control:** Complete control of all connections and plans will greatly reduce errors in the design stage. Easily reviewing all processes during the design will enable the designer to avoid future mistakes.
- **Preparing the estimate:** Real time calculation of prices of all cables and conduits. Export of price details into the construction estimation software.



## 1.4. Solving design problems using CableProject CAD

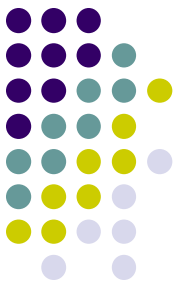
When working with Network Cabling, companies-integrators face several problems:

### **The need for a quick project evaluation before design documents are developed.**

During the design process with Cable Project CAD, users collect real usable subassemblies which are often used in projects. They can be used when a fast rough estimation is needed. Cable Project CAD is highly flexible and enables quick placement of necessary of work areas and racks calculating all measurements and lengths by applying empirical coefficients which are available as a preliminary cost report. The developed draft can be converted into an actual project in the future.

### **The need to design several project variations by applying various vendors and technologies.**

When designing Network Cabling with Cable Project CAD, you can exchange any piece of equipment for another one quickly. The system will automatically check its compatibility. Using Cable Project CAD you can always develop several variations of one project to always be ahead of your competitors!



## 1.4. Solving design problems using Cable Project CAD

**Corrections can be made by project owner at any moment.**

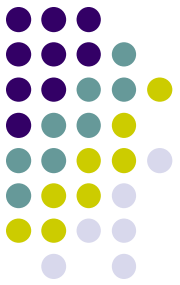
Customer opinion is the law – and the network designer is always busy with routine redesign. Is this your reality?

When designing with Cable Project CAD you will become accustomed to making corrections with any project at any moment. The resulting documents are all updated instantly.

**Equipment ordering: almost every time a few details are missed and it is necessary to add these to the order.**

This results in the necessity to maintain a large inventory and tying up your cash.

Using Cable Project CAD helps to eliminate this problem. Cable Project CAD will estimate the precise equipment quantity unlike the usual design where it is almost impossible to create a precise equipment order.



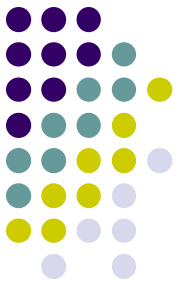
## 1.4. Solving design problems using Cable Project CAD

**Complex projects are time consuming and coordinating the work of several design engineers is complicated.**

Imagine having the ability to simultaneously update your project database and component library across your local network using full client-server architecture. This would mean, one change makes it available for all.

**Cable and conduit actual lengths often don't match the designed project.**

The reason for this is usually two-dimensional designing and great complexity of routine calculations. With CableProject CAD accomplishes its design using "Z" coordinate technology. All risers are designed automatically according to set options. There is also the option for manual change and creation. Cable length reserves are also accounted for. Therefore, full calculation of each piece of cable is completed. There is no other method as precise. This is automatically done in CableProject CAD.



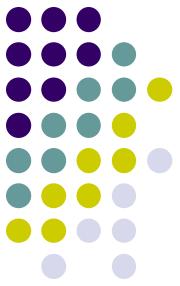
## 1.4. Solving design problems using Cable Project CAD

### **The need to compose construction estimates applying local standards**

A well-known problem occurs when the estimating engineer receives a project that requires him to begin his work from scratch.

The designer spends hours explaining the details about local standards and describing the amount of work required for the network cabling project.

When using Cable Project CAD you will save time and save a huge amount of estimation engineer work. Cable Project CAD generates a universal data interchange file which is completely ready for data transmission into the estimate documentation software. The estimation engineer only needs to complete this data with specifics and finish the supplementary costs and the estimation legal forms.



## 2. Demonstration – actual project design

Now a demonstration on a real project creation will be performed. All steps have supporting comments.

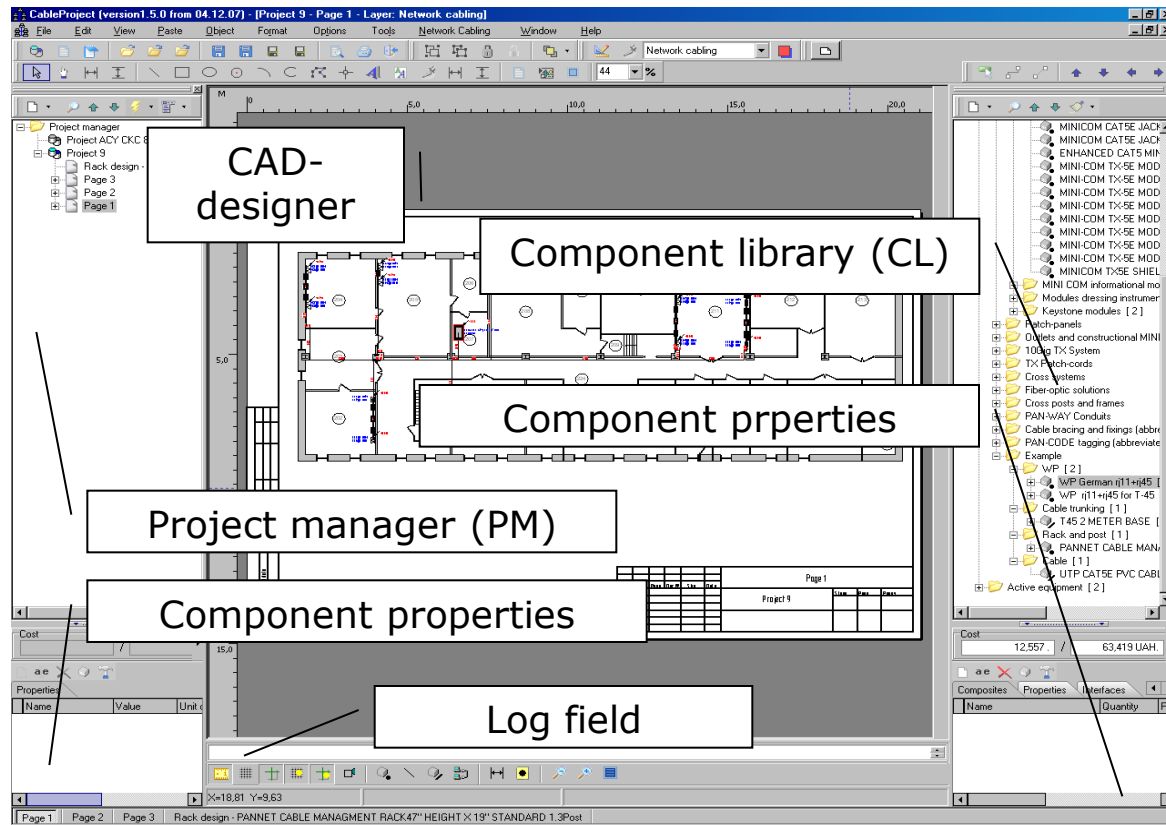
### ***Project options:***

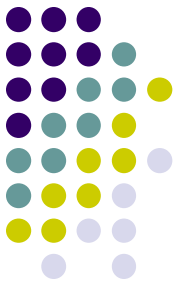
- Building: 2 floors
- Area: 760 m<sup>2</sup>
- Ports quantity: 24
- Racks quantity: 1
- Design network type: LAN, telephone
- LAN class: 6
- Ceiling height: 2.8 m.



## 2.1. Demonstration: overview and terminology

The software overview:





## 2.1. Demonstration: overview and terminology

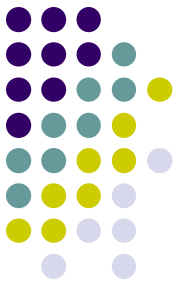
For better demonstration understanding, it is necessary to become acquainted with the general terminology used in Cable Project CAD:

**Component** – Network Cabling stock unit (ex. module, frame, cable, adapter, etc.). Smallest (non-detachable) components that can be used to create assemblies (ex. patch-panel contains in itself 24 modules, etc.).

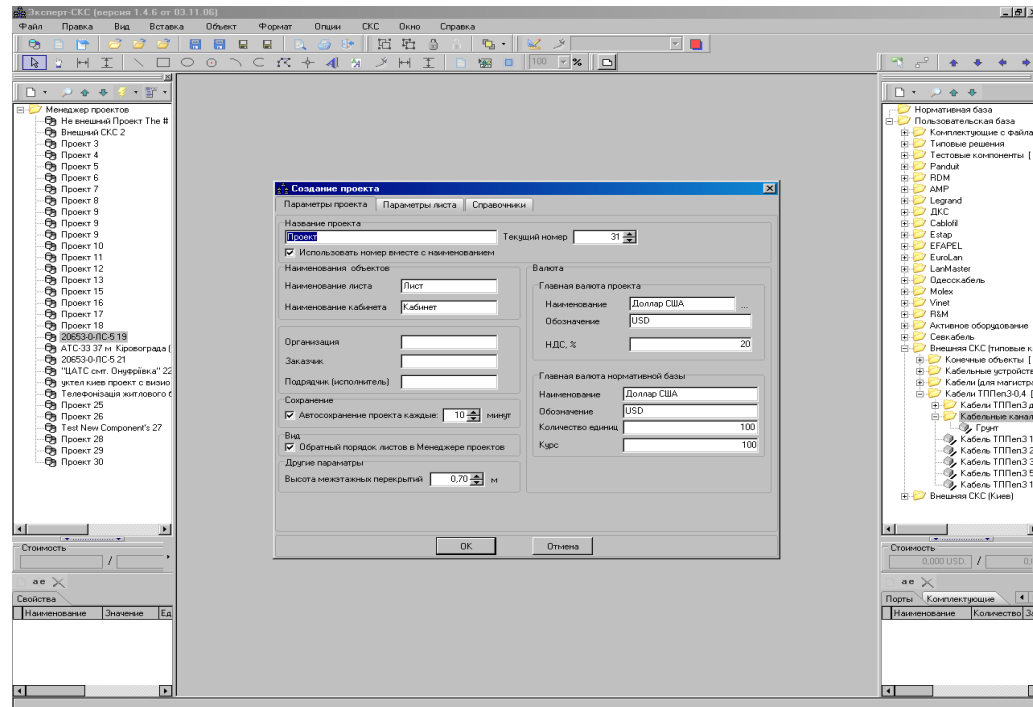
**Component interface** – the component's parameter influencing compatibility of the selected component with other components. Each component interface has a type: operational/constructive type: split/unsplit, gender: female/male, graphic symbol type: actual/designed (ex. Mini-com, mosaic, etc.)

**Component properties** – common properties of general data which can be used for connection control (ex. color, width, release date, etc.)

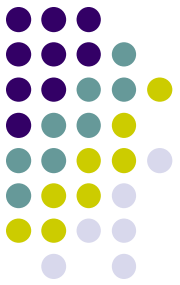
**Component port** – final component interface which should be tagged in all projects (ex. RJ-45, 110V outlet, etc.)



## 2.2. Demonstration: simple project creation



For a new project press the button "Create a project" or the combination of keys «CTRL+N». The dialog box "Project creation" will be displayed. Before creating a new project the following parameters must be indicated – project name, page name, cabinet name, floor height, main project currency.

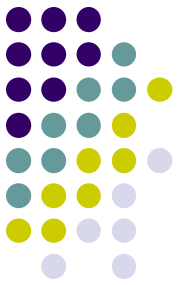


## 2.2. Demonstration: simple project creation

The screenshot shows the 'Create project' dialog box with the 'Page options' tab selected. The 'General' sub-tab is active, displaying various configuration options for a project. The 'Page name' field is empty, and the 'Current number' is set to 1. The 'Floor options' section includes 'Floor height' (0.5 m) and 'Drop-ceiling height' (0.3 m). The 'Cables/conduits options' section includes 'Cable length reserve rate' (10%), 'Conduit occupation rate' (50%), 'Port reserve' (0.5 m), 'Cross reserve' (1 m), and 'Maximum length restrictions (TP only)' (90 m). The 'Route/cable/box routing height' section includes 'Route/cable/box routing height' (0.7 m) and 'Default angle type' (Internal). The 'Undo' section includes 'Cancelling actions quantity' (1). The 'Designed network type' section includes 'Customer-access network' (selected) and 'External distributional network'. The 'Restore default settings to new projects' section includes 'Apply current settings to new projects' and 'Save (load) settings to (from) file...'. The 'OK' and 'Cancel' buttons are at the bottom.

Section	Option	Value	Unit
Floor options	Floor height	0.5	m
	Drop-ceiling height	0.3	m
Cables/conduits options	Cable length reserve rate	10	%
	Conduit occupation rate	50	%
	Port reserve	0.5	m
	Cross reserve	1	m
	Maximum length restrictions (TP only)	90	m
Route/cable/box routing height	Route/cable/box routing height	0.7	m
	From ceiling	0	m
	From ceiling (false)	0	m
Default angle type	Internal	Selected	
	None	Not selected	
Undo	Cancelling actions quantity	1	

On the tab "Page options", select the tab "General" and enter project data.



## 2.2. Demonstration: simple project creation

*Floor height – 2.8m.*

*Drop-ceiling height – 0.3m*

*Cable length reserve rate – 10%*

*Conduit occupation rate – 50%*

*Port reserve – 0.5m.*

*Cross reserve – 1m.*

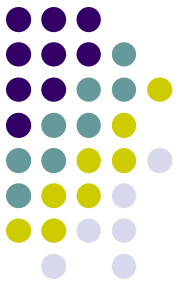
*Maximum length restrictions – 90m.*

*Point object placement height – 0.3m. (from floor)*

*Route laying height – 0.7m. (from floor)*

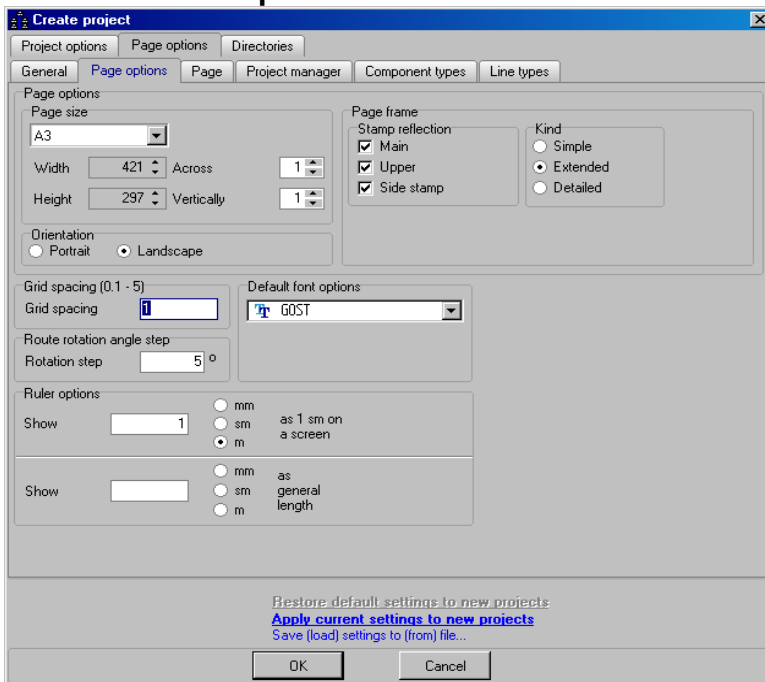
*Default angle type - internal*

Move to “Page options” tab and set these parameters also.



## 2.2. Demonstration: simple project creation

On the “Page options” tab set these options:



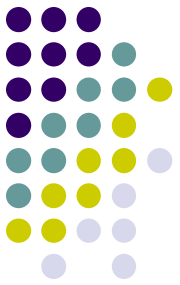
*Page Size: A3*

*Page alignment: Portrait*

*Kind: Extended*

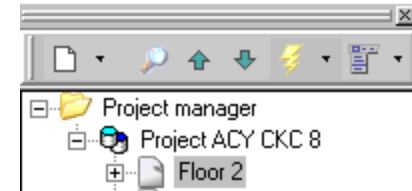
*Font: GOST (supplied with the software)*

All options may be edited at any moment during the design.

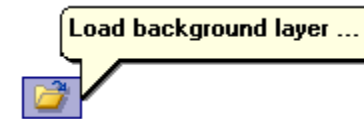


## 2.2. Demonstration: simple project creation

After pressing the “OK” button, in the “Projects options” window, the system creates a new project with one page.

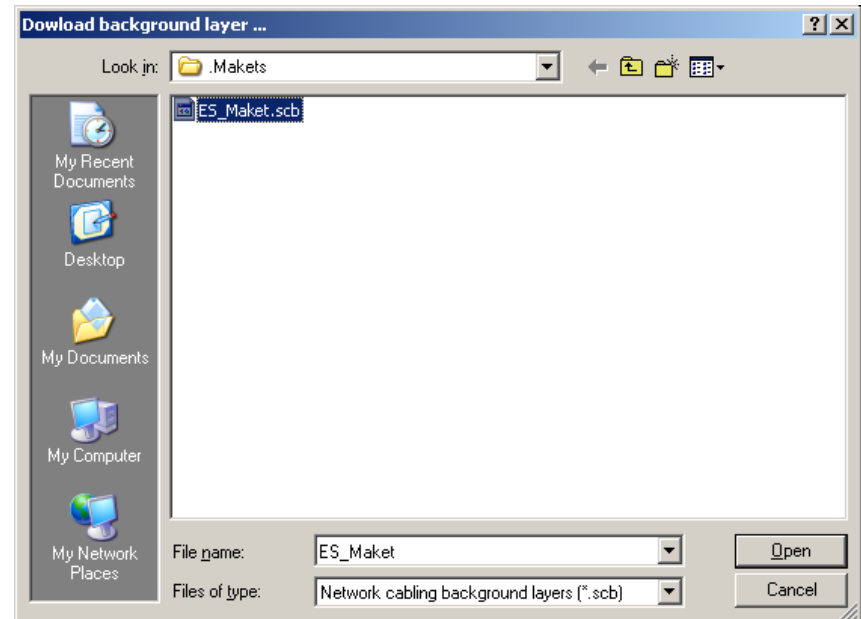


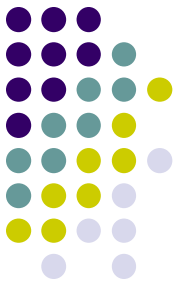
To begin designing, the floor architectural plan is needed (ground layer). There are several ways for its creation: draw it with the help of Cable Project CAD tools or import a ready made plan from another CAD software program.



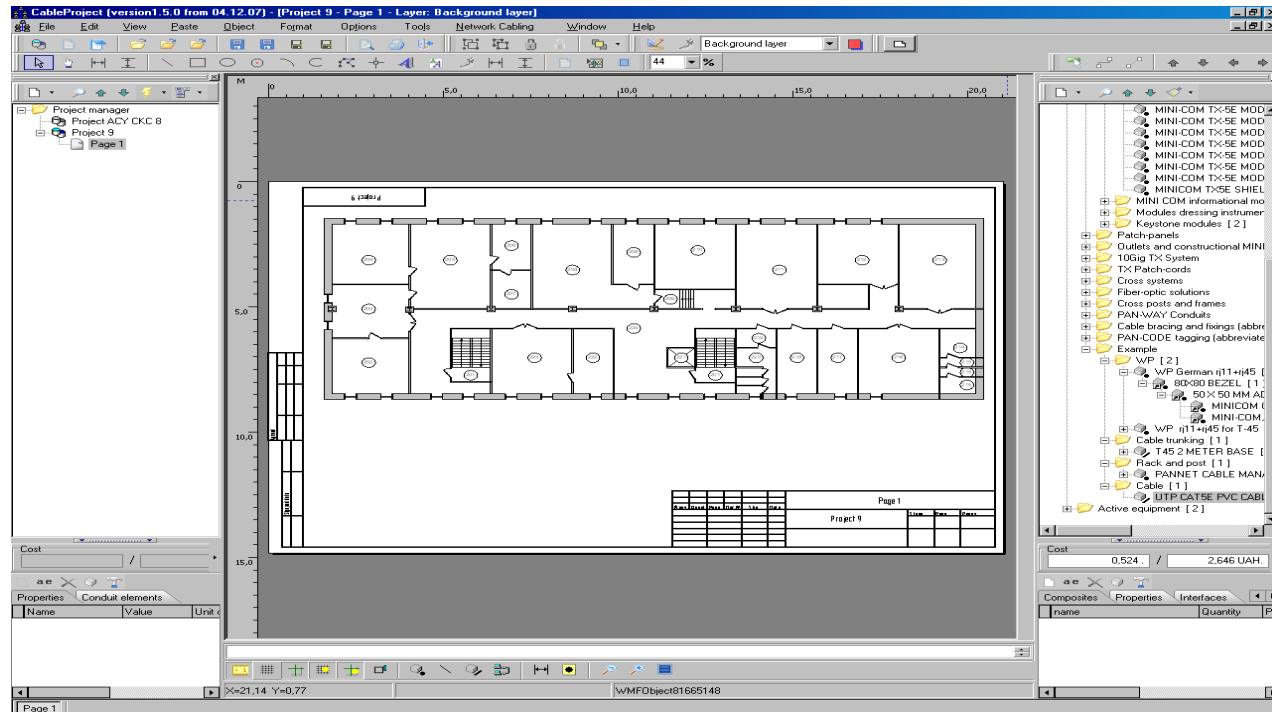
Download previously designed architectural floor plans from the ground layer file.

In this case, the preliminary architectural plan was earlier imported from the MS Visio® through the standard clipboard. Then it was saved as a ready ground layer plan.

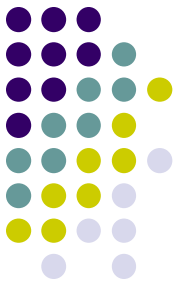




## 2.2. Demonstration: simple project creation

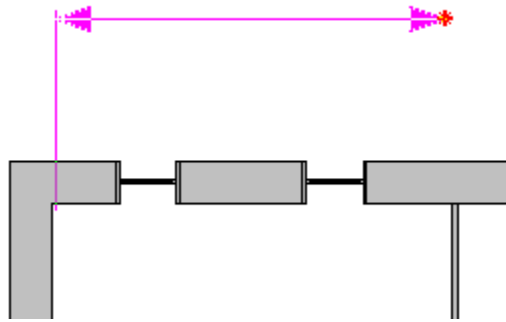
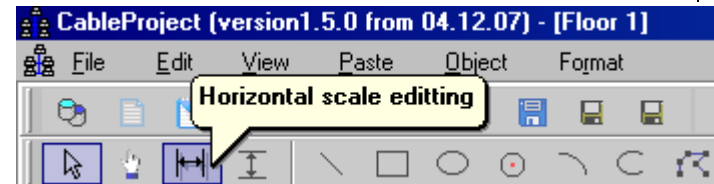


After loading the floor architectural plan (ground layer), adjust the scale for correct calculation of cable and conduits length.



## 2.2. Demonstration: simple project creation

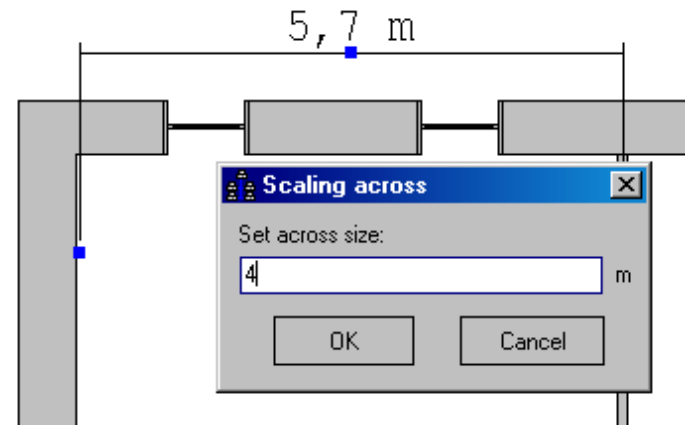
To do this, we'll use the tool "Horizontal scale correction"

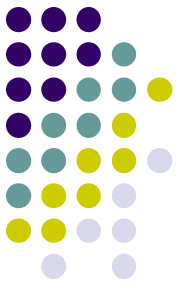


Draw a dimension for a specific room.  
Determine the actual length.

To do this, double click on the dimension line, indicate the actual length in the displayed dialogue window.

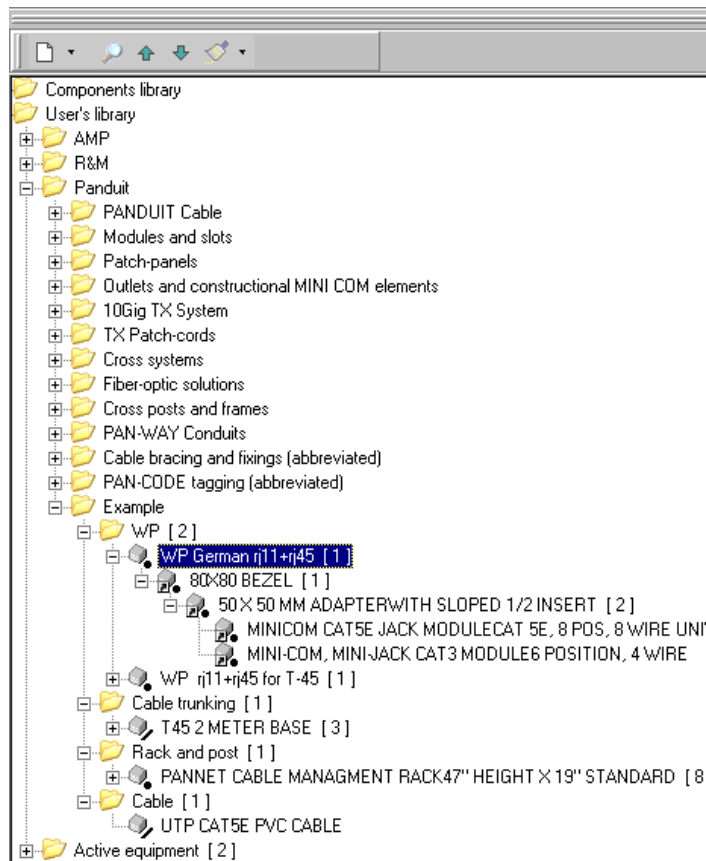
After this, the ruler will resize and Cable Project CAD will recalculate all linear lengths and sizes according to the determined length.





## 2.2. Demonstration: simple project creation

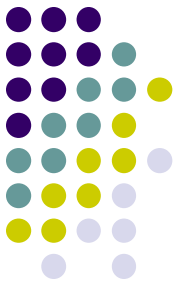
Now, we'll move to assembling the work areas and their placement on the plan.



Select the assembled work area. In this example, we will use Panduit components. In the components library pane, select the assembled work area (WA), which, as it shown, includes one inside two-port box, which in is assembled with two RJ11 and RJ45 modules.

Press and hold the left mouse key. Drag the selected WA and place it on page.

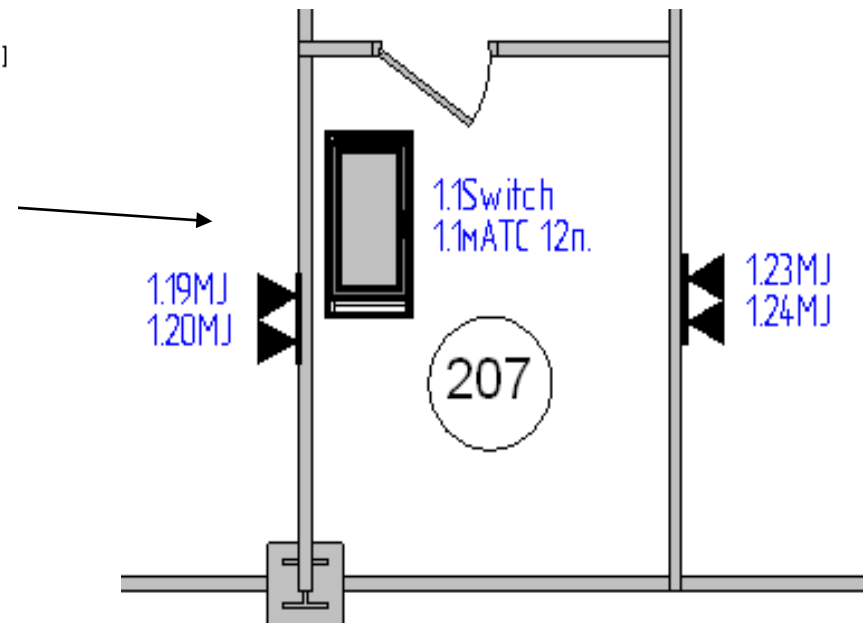




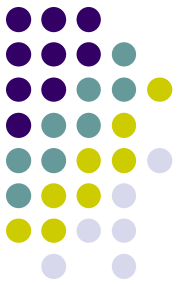
## 2.2. Demonstration: simple project creation

Now let's place complete Panduit rack using the same steps as we did for WA

- PANNET CABLE MANAGEMENT RACK 47" HEIGHT X 19" STANDARD 1.3Post [ 31 ]
- VOICE PATCH PANEL 568A
- SS 3 Switch 4400 24-port 10/100 1.1Switch 24-port 10/100
- PANNET 19" HORZ. CABLE MGR. 1RUFRONT ONLY 1.10rg.
- 24 PORT FLAT DP5E DATAPATCH PANEL
- Mini-ATC 1.1mATC
- PANNET 19" HORZ. CABLE MGR. 1RUFRONT ONLY 1.20rg.
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.99PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.100PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.101PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.102PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.103PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.104PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.105PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.106PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.107PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.108PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.109PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.110PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.111PC
- CAT 5 PATCH CORD WITH HIGH PERFORMANCE MOD PLUG 1.112PC



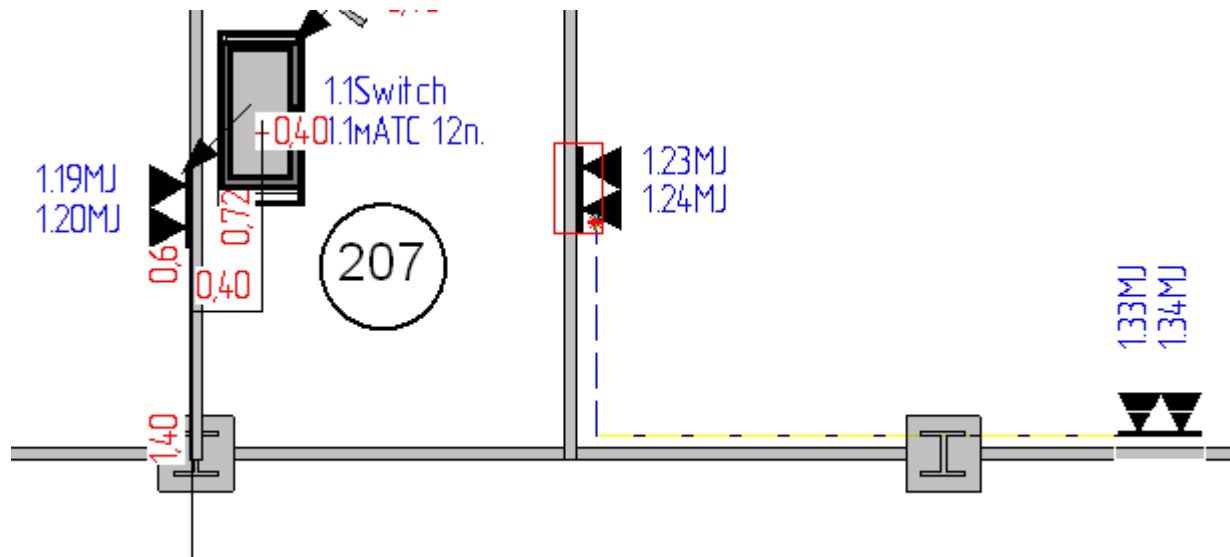
As you can see, the selected cable management rack includes: switch, mini PBX, patch-panels, combs (cable organizers) and patch-cords.

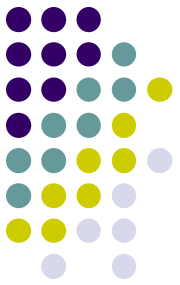


## 2.2. Demonstration: simple project creation

Creation of routes – connections between  
WA and rack

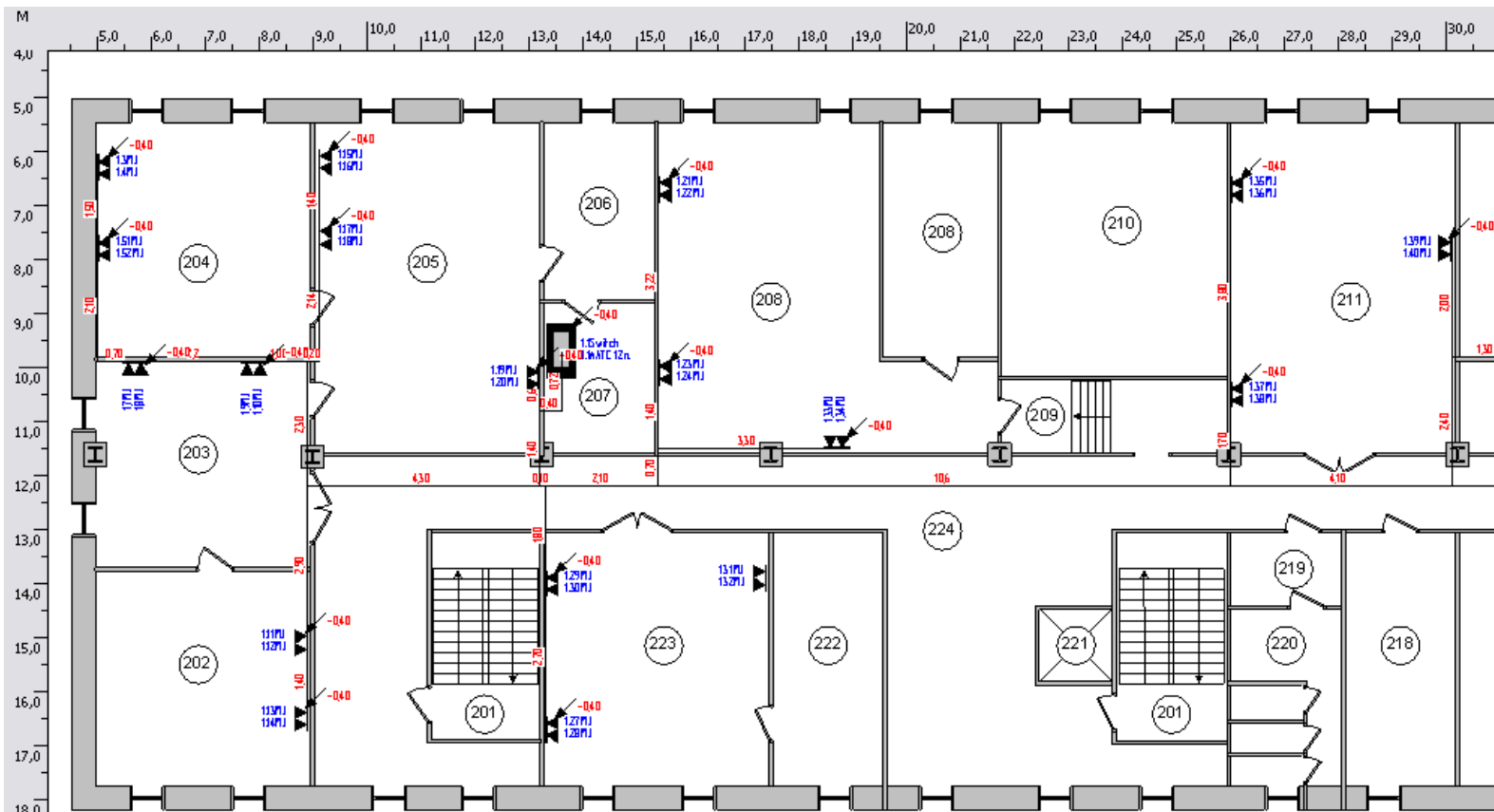
For this we'll use the tool – “route”

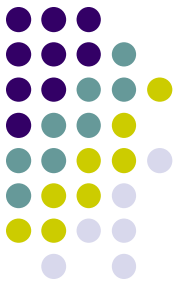




## 2.2. Demonstration: simple project creation

As a result we have a ready-to-go Network-infrastructure

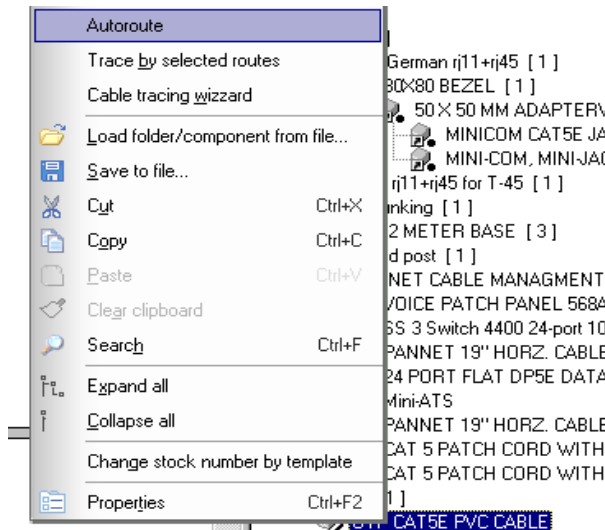
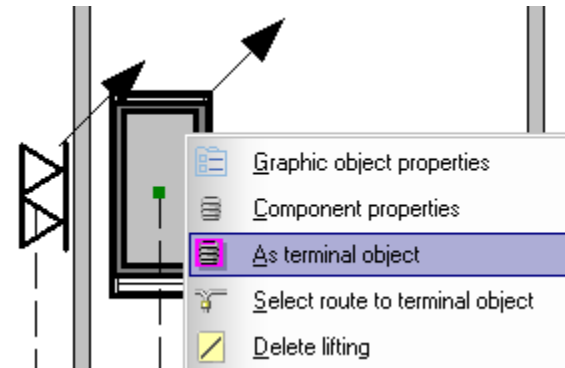




## 2.2. Demonstration: simple project creation

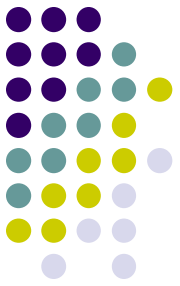
Now we must lay the suitable cable for WA and rack connection. The most convenient method for this is the auto-routing tool.

At first, a rack should be installed as a terminal object (this means that an automatically traced cable connects to this point). To set a rack as a terminal object execute “Set as terminal object” from the pop-up menu of a rack.



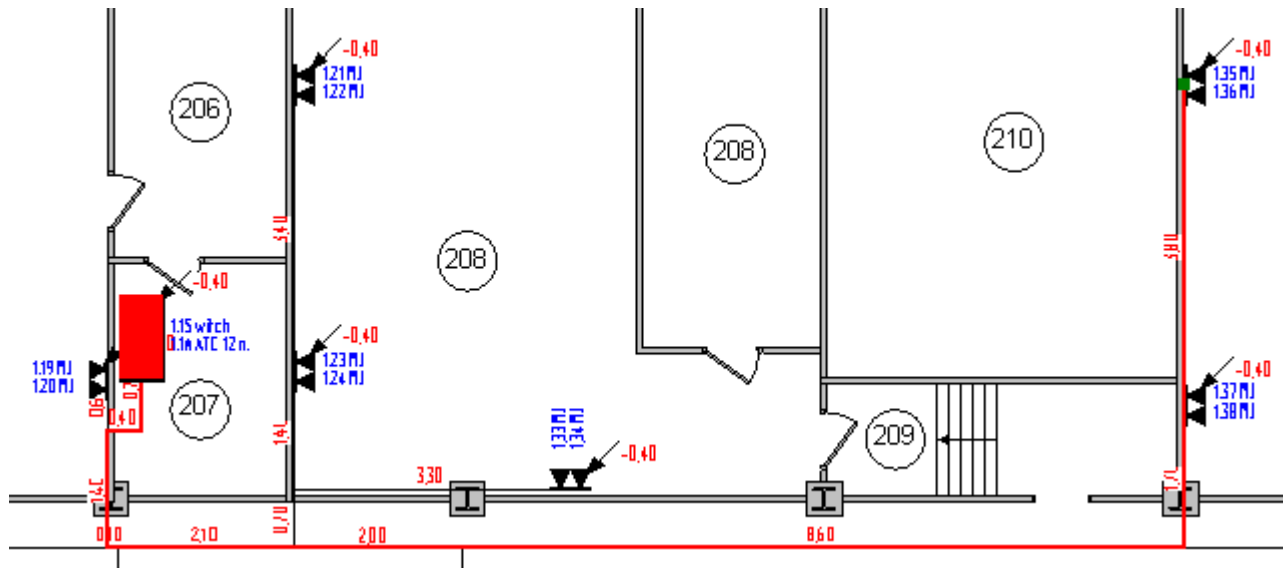
Then, select the suitable cable in the components library and execute the “Auto-route” command from the pop-up menu .

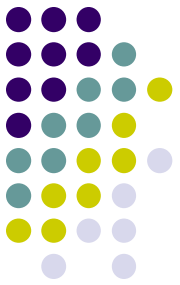
Cable Project CAD will automatically trace the selected cable from all connected WA to the terminal rack.



## 2.2. Demonstration: simple project creation

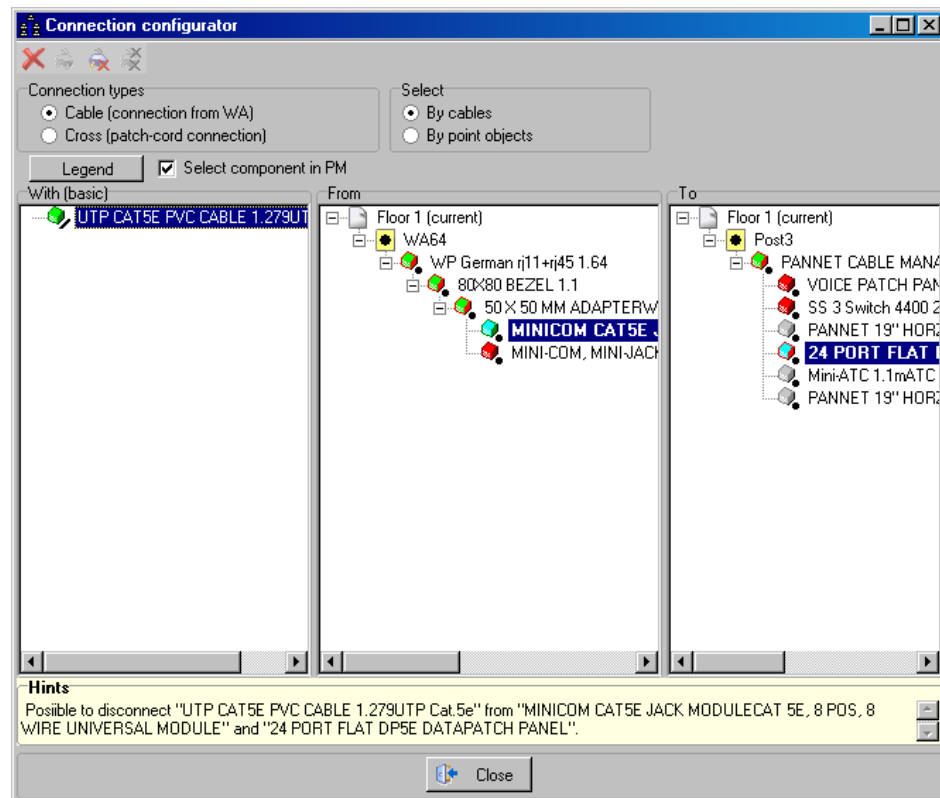
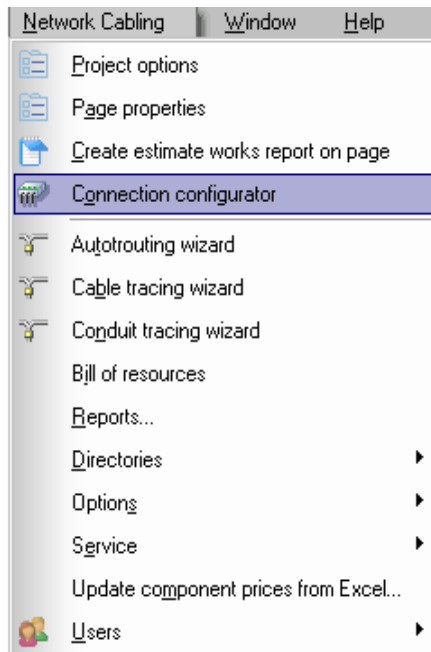
After selecting the work area we can see its connections and its routes:

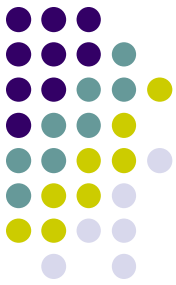




## 2.2. Demonstration: simple project creation

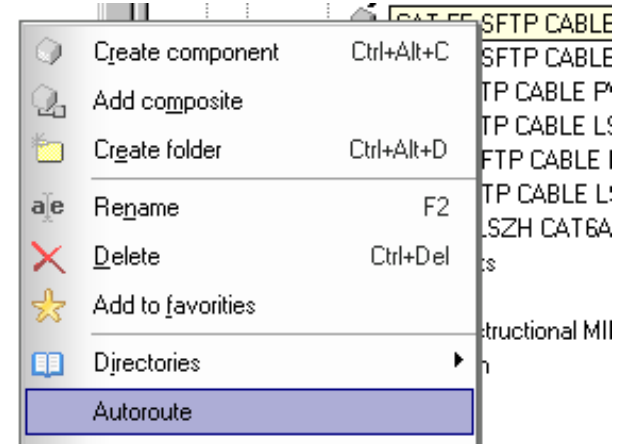
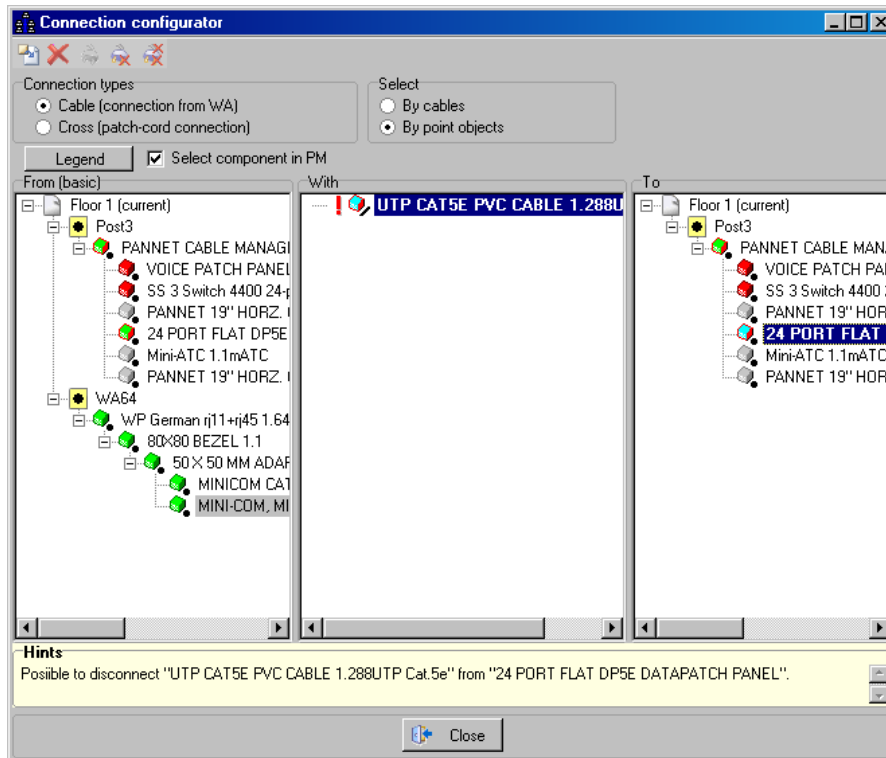
Extended information of connections can be seen on the form “Connection configurator”:





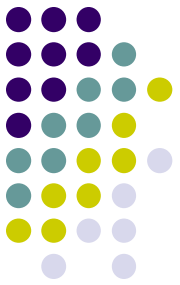
## 2.2. Demonstration: simple project creation

In the same way, set the auto-routing of telephone cables from the work area into the rack. The cable should be Cat. 5e.



After this, in the connections configurator, all connections can be seen.

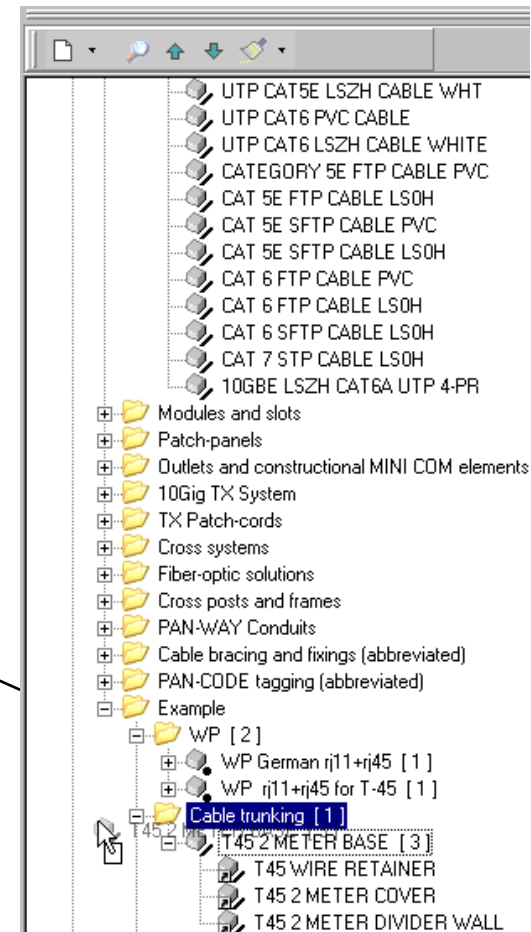
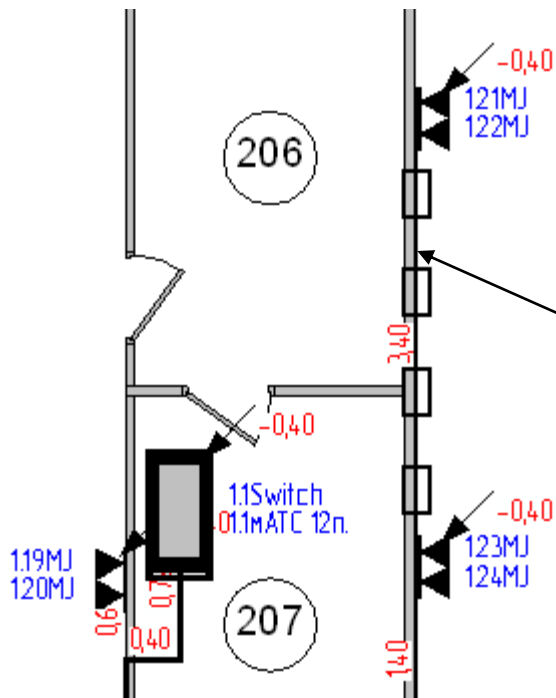
Cable connections on this floor may be considered as done.



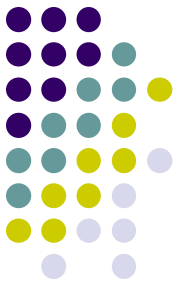
## 2.2. Demonstration: simple project creation

Setting up conduits.

For conduits we'll use a manual method. Just drag the selected conduit over appropriate routes.

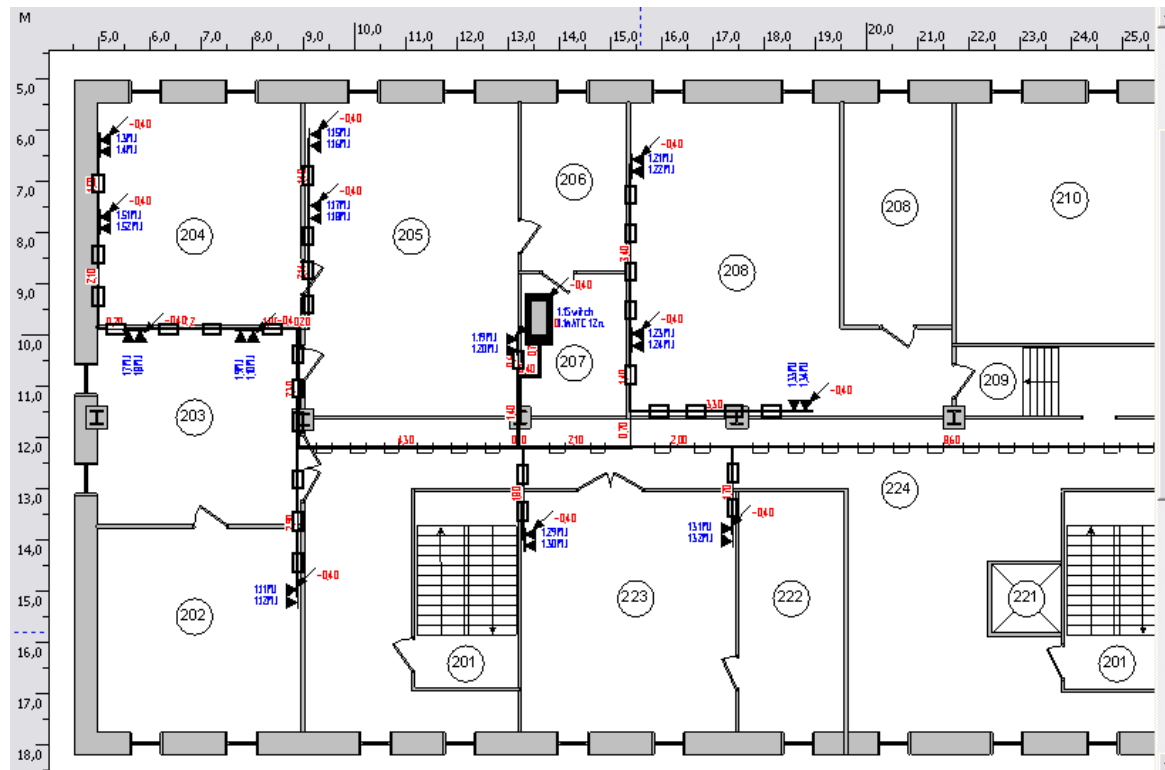


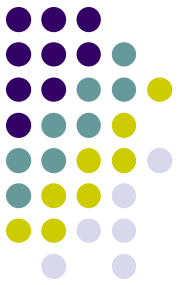
## 2.2. Demonstration: simple project creation



By repeating all the indicated actions we will setup all conduits. In the corridor line section, we will use the hanging tray.

By the end of the design we will see the results as shown:



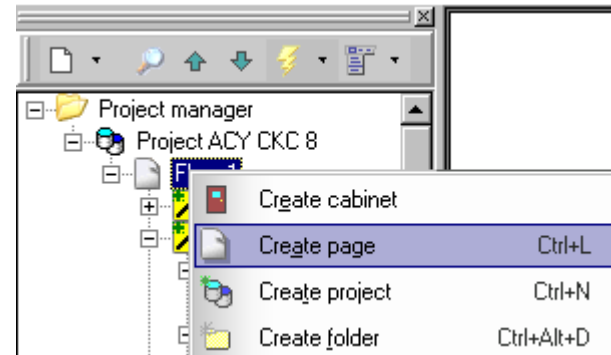
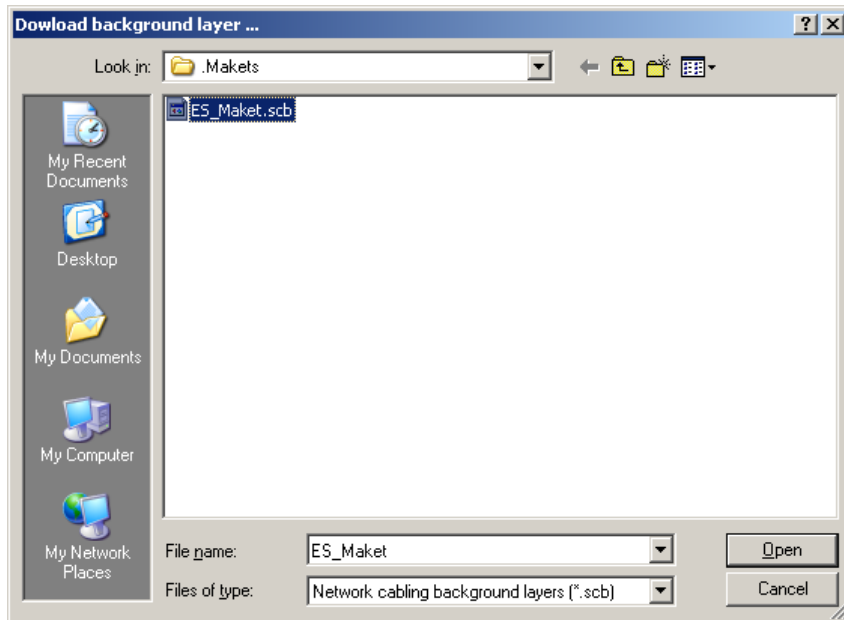


## 2.2. Demonstration: simple project creation

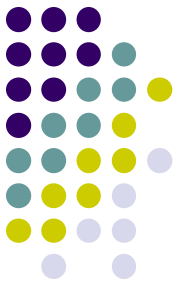
Second floor design.

1. New page creation.

In project manager execute “Create page” command from the pop-up menu.

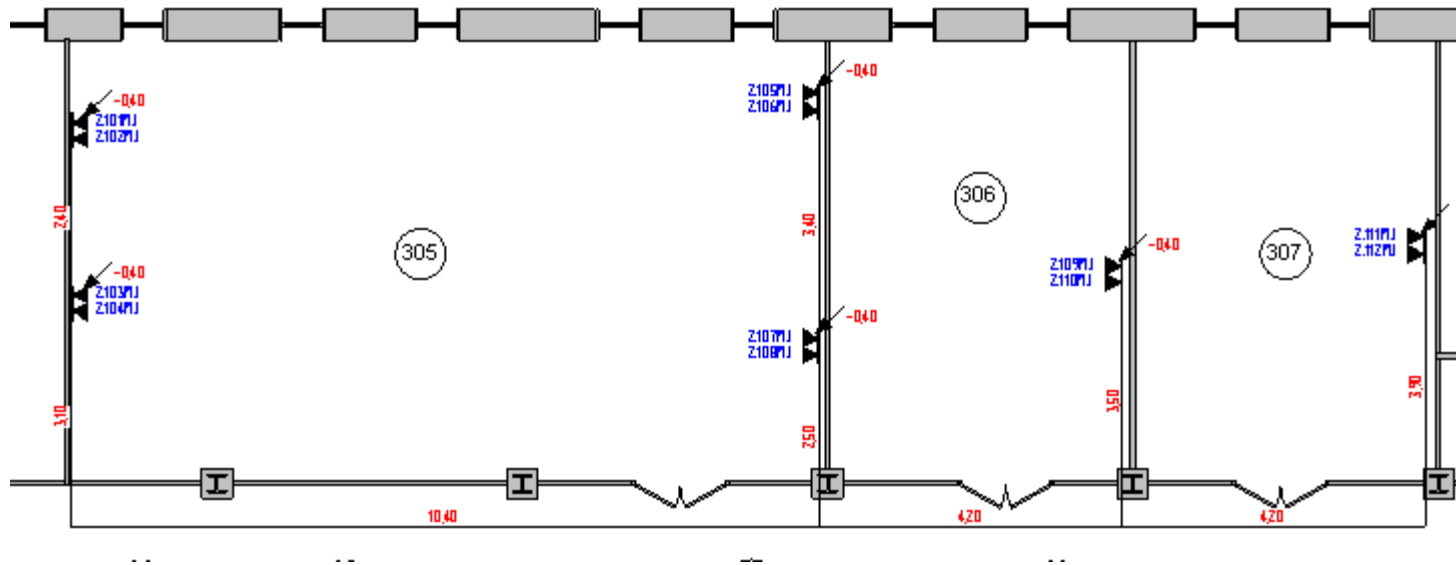


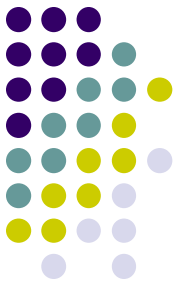
2. Load the prepared floor plan.  
Just do it the same way as it was done for the first floor.



## 2.2. Demonstration: simple project creation

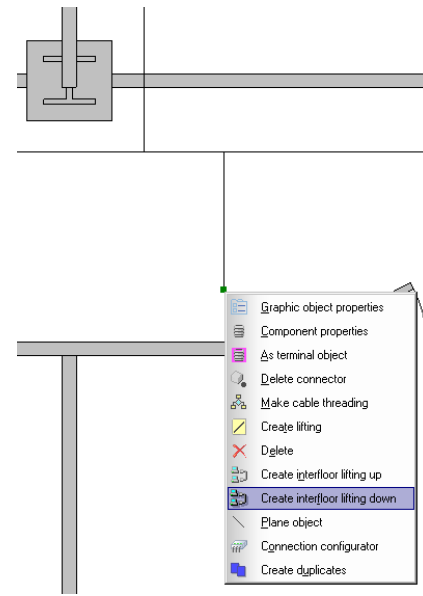
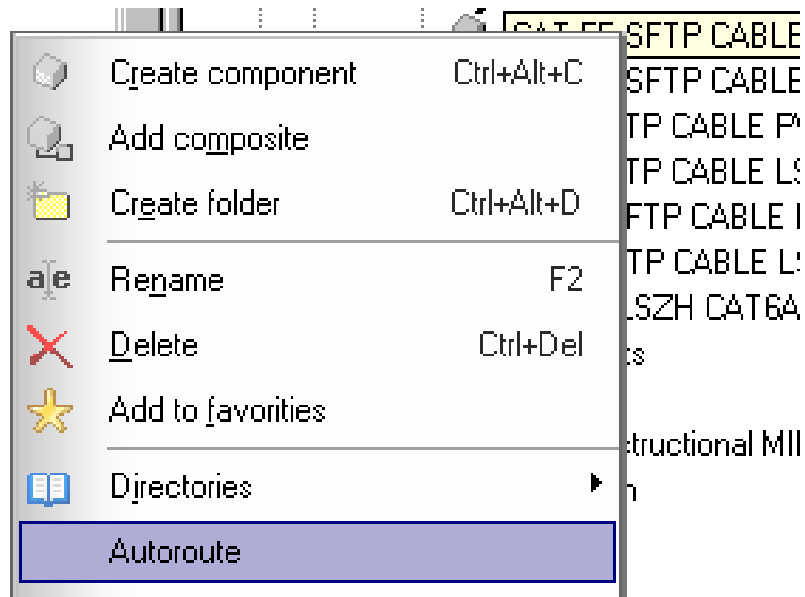
Setup work areas and routes using the same actions as we made for the first floor according to the project owner requirements. The final design should be as shown in the screen-shot:



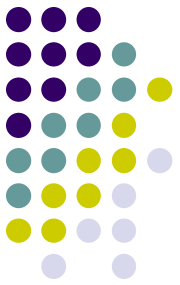


## 2.2. Demonstration: simple project creation

For interfloor connection in a single network, we must create an interfloor riser:

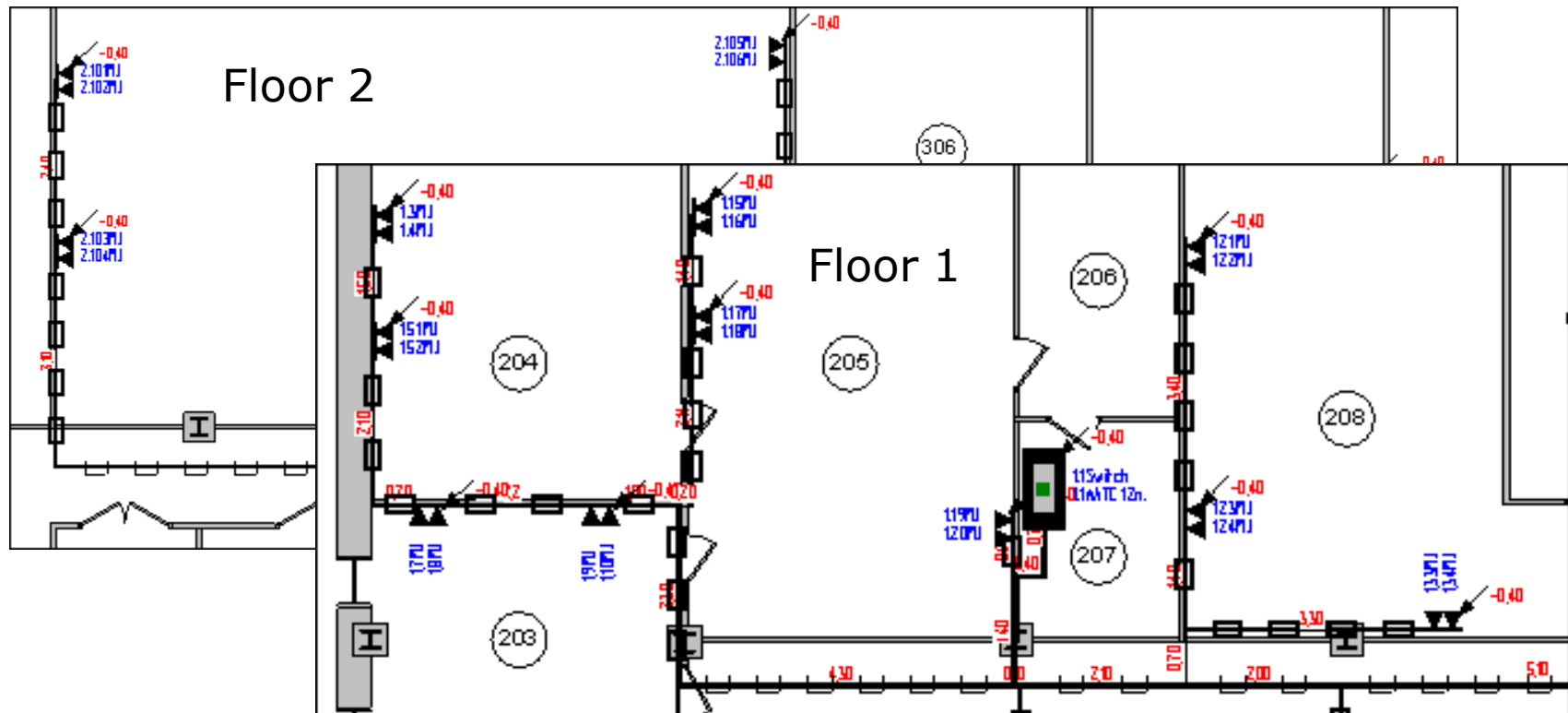


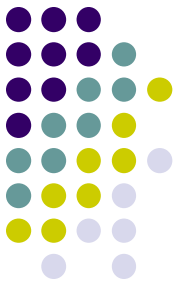
Provide the enclosure of the interfloor riser at the first floor into the network. After that, conduct the cable auto-routing process and set the conduits.



## 2.2. Demonstration: simple project creation

As a result we have finished the Network Cabling design on the buildings' first and second floors:





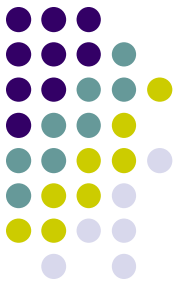
## 2.3. Demonstration: Advanced project modification

By now, the core of the project has been completed. However, the designed project is not final yet. We will now demonstrate how the additional modifications can be made.

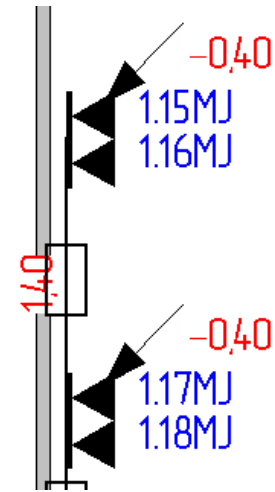
In the advanced project modification section of our presentation the following functions will be demonstrated:

- Assigning the elements in the vertical plane using the Z coordinate
- Customizing the tagging on a page.

Many other capabilities of Cable Project CAD are not shown. You can see all of them in a Functionality section of the current presentation.

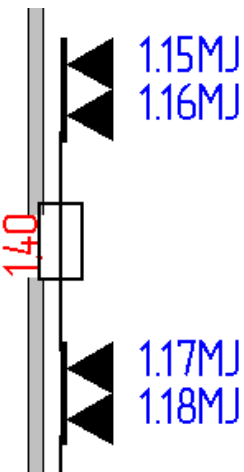
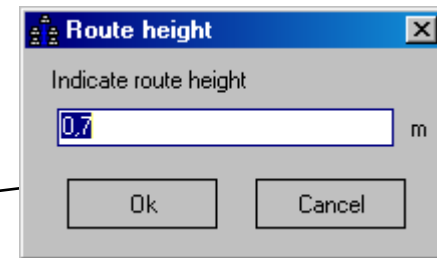


## 2.3. Demonstration: Advanced project modification



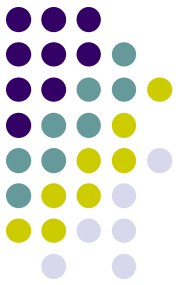
As shown in this section, the route is placed higher than the work areas. Cable Project CAD created a down riser 0.4m automatically. This is determined by the option “automatic point object placement” with a height of 0.3m from the floor, and linear objects with a height of 0.7m from the floor (this was set in project options). Suppose, in this section, we need to lower the route for the WA height.

For route level alignment up to the working area level, perform the “lift route” command from the pop-up menu on the selected route.



Indicate the route height 0.3m (the same in WA).

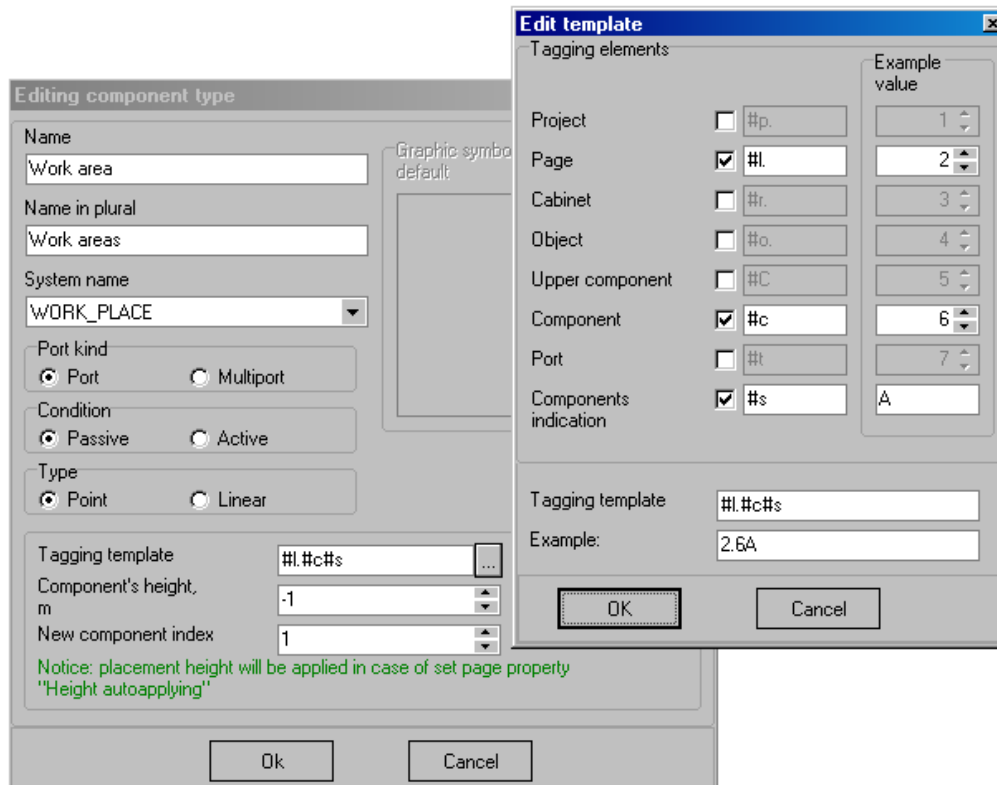
As shown by the graphic symbol now the height of the selected section, the WA and the route are all the same.



## 2.3. Demonstration: Advanced project modification

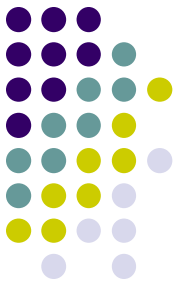
Changing the object tagging mask.

There are two ways to change tags for objects: manual and automatic.



To use change the automatic tagging method, use the tagging template options for the selected component.

## 2.3. Demonstration: Advanced project modification



Change the WA tagging.

In the current template, the used mask shows page number, component's number and its notation.

**Edit template**

Tagging elements

Project	<input type="checkbox"/>	#p.	1
Page	<input checked="" type="checkbox"/>	#l.	2
Cabinet	<input type="checkbox"/>	#r.	3
Object	<input type="checkbox"/>	#o.	4
Upper component	<input type="checkbox"/>	#C	5
Component	<input checked="" type="checkbox"/>	#c	6
Port	<input type="checkbox"/>	#t	7
Components indication	<input checked="" type="checkbox"/>	#s	A

Tagging template: #l.#c#s  
Example: 2.6A

OK Cancel

Delete the page number:

**Edit template**

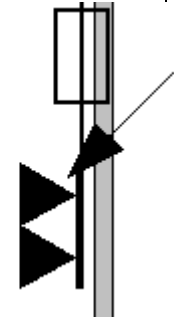
Tagging elements

Project	<input type="checkbox"/>	#p.	1
Page	<input type="checkbox"/>	#l.	2
Cabinet	<input type="checkbox"/>	#r.	3
Object	<input type="checkbox"/>	#o.	4
Upper component	<input type="checkbox"/>	#C	5
Component	<input checked="" type="checkbox"/>	#c	6
Port	<input type="checkbox"/>	#t	7
Components indication	<input checked="" type="checkbox"/>	#s	A

Tagging template: #c#s  
Example: 6A

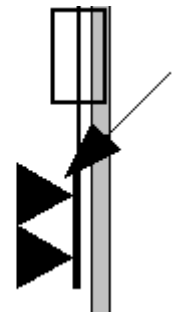
OK Cancel

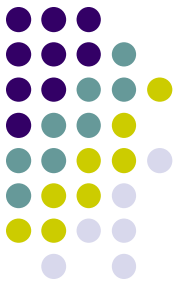
1.11MJ  
1.12MJ



Check the changes on the page:

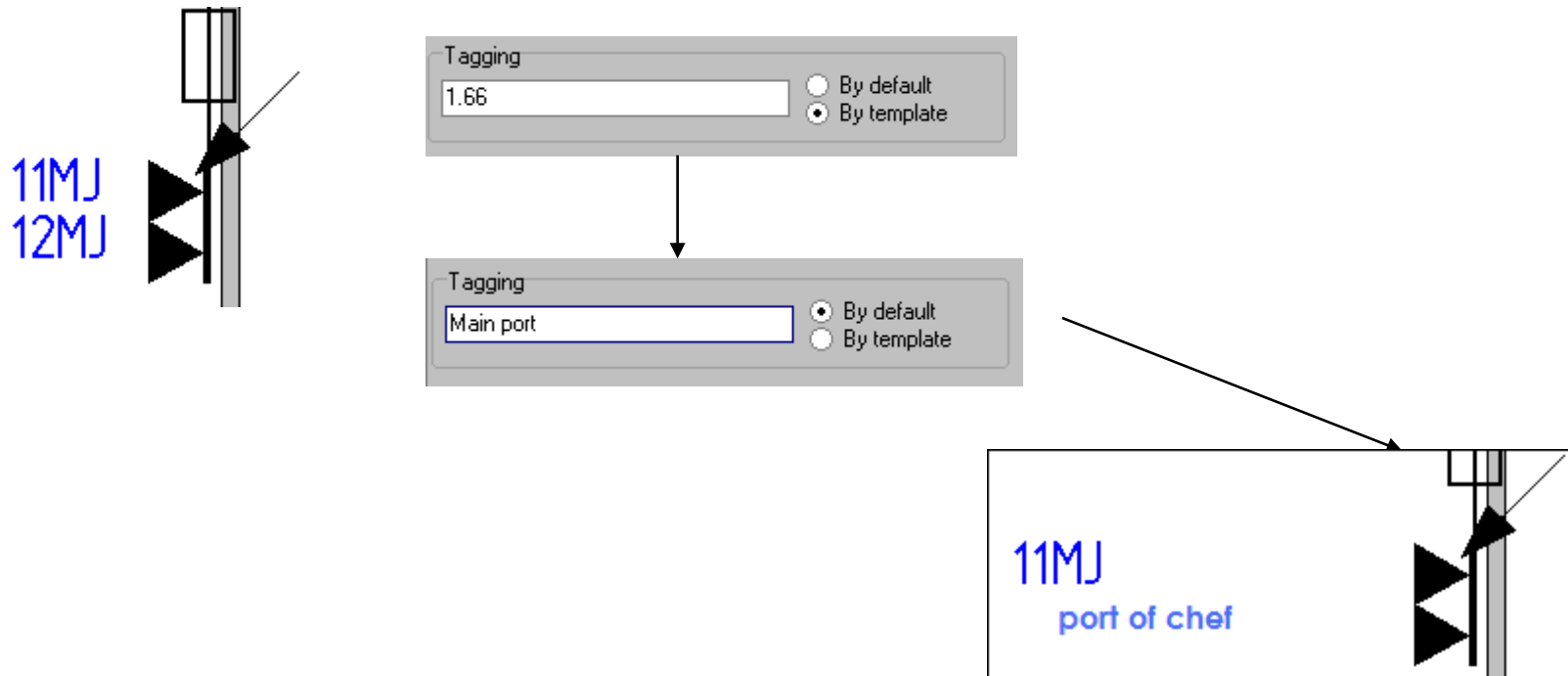
11MJ  
12MJ

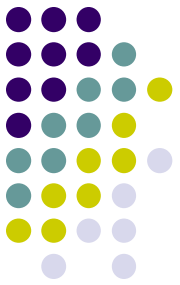




## 2.3. Demonstration: Advanced project modification

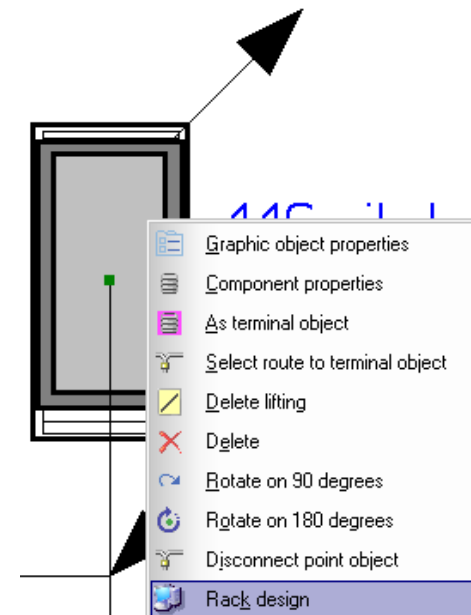
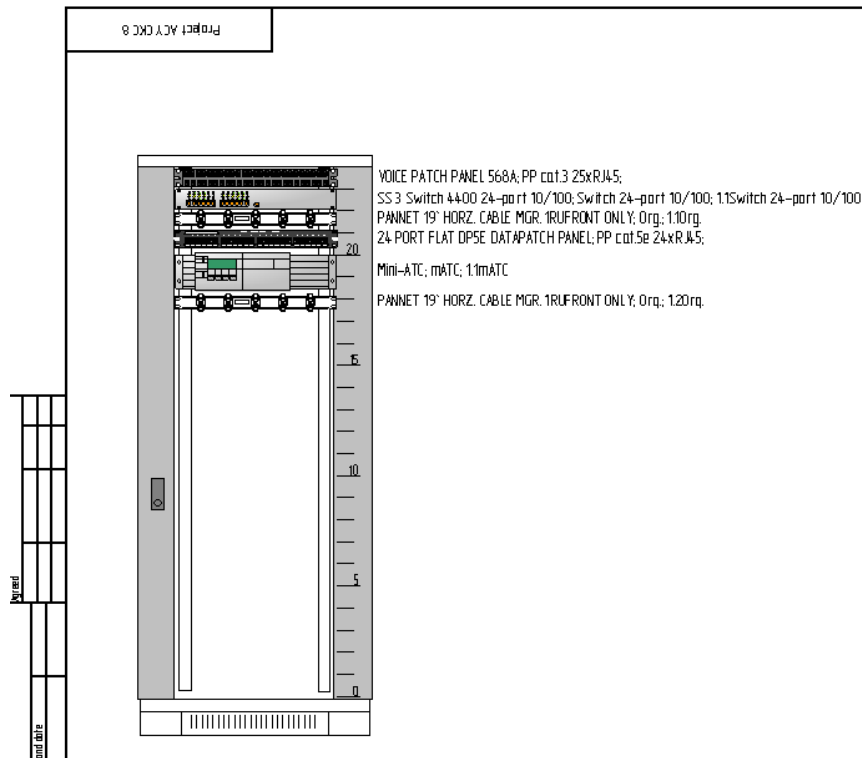
For manual tag editing we'll use the "components properties adjust" window.

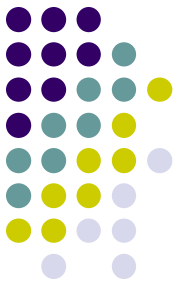




## 2.4. Demonstration: design results

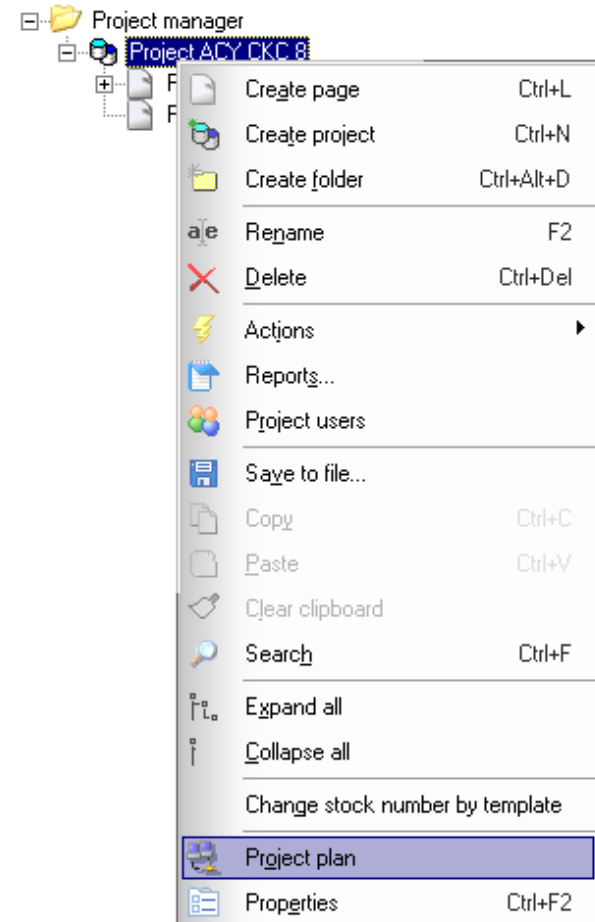
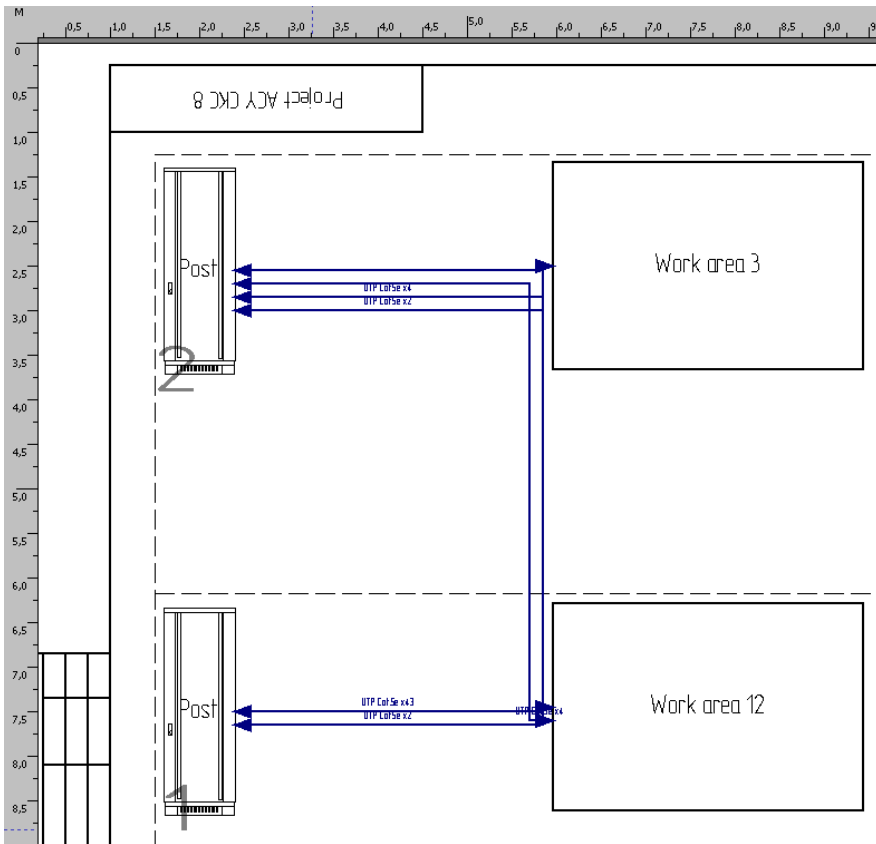
As the result, Cable Project CAD generates the following plans and reports:  
Rack design scheme:

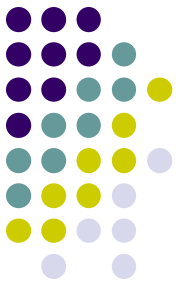




## 2.4. Demonstration: design results

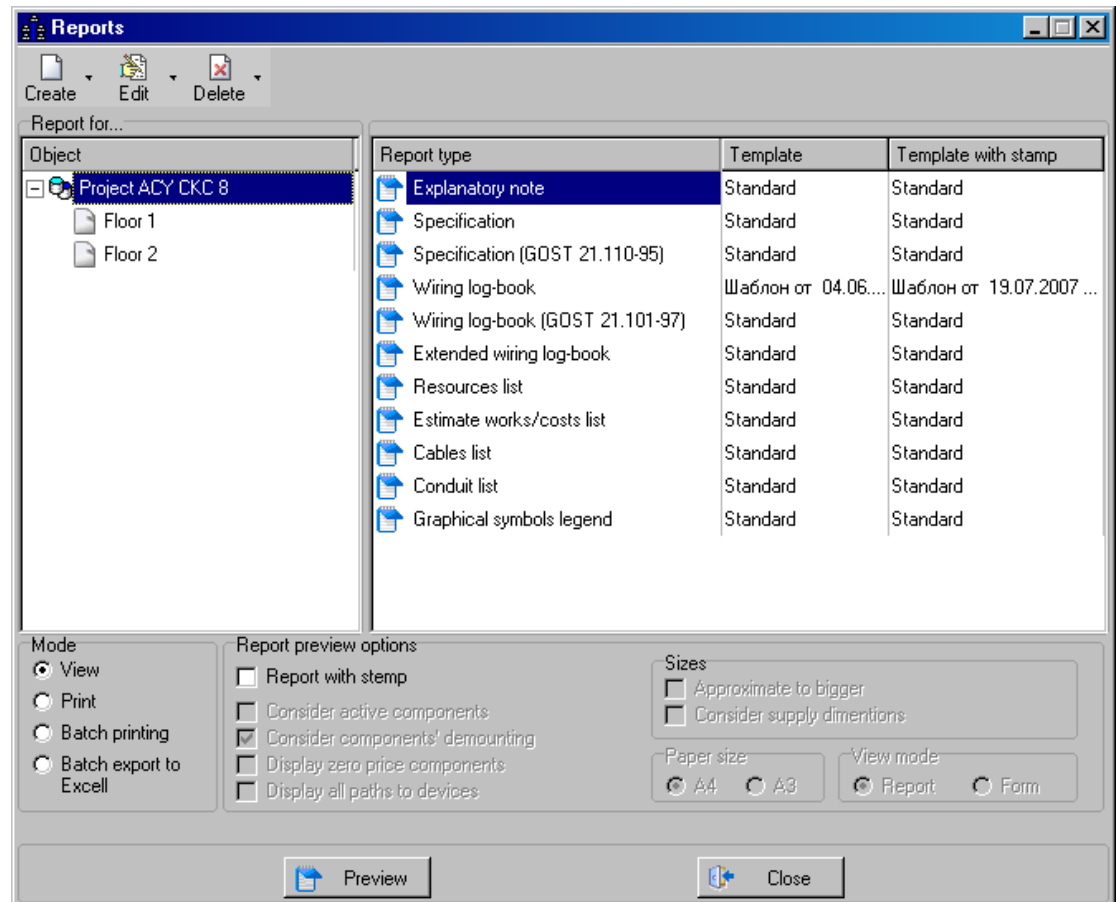
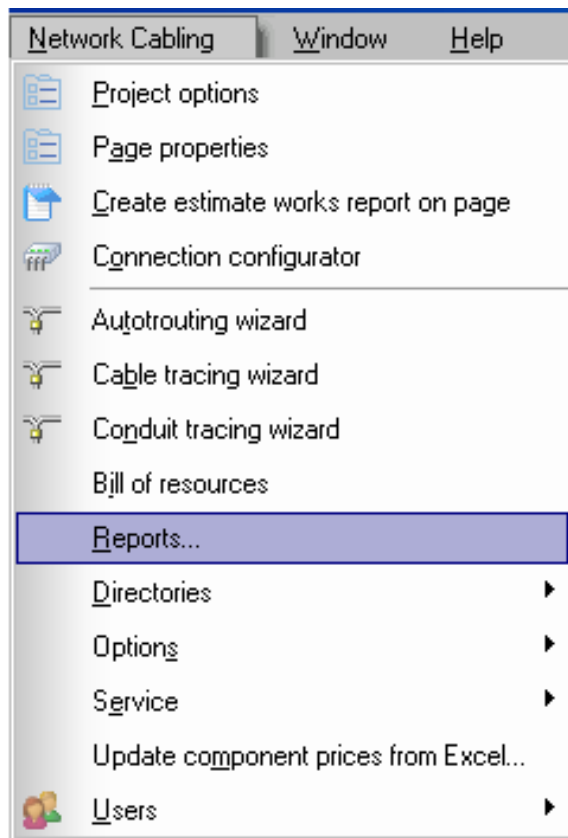
Building plan (network topology):

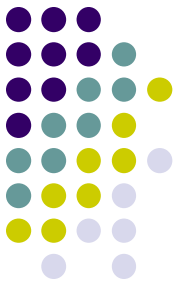




## 2.4. Demonstration: design results

Legal reports:





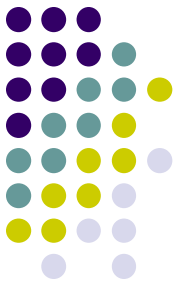
### 3. Cable Project CAD capabilities

CableProject CAD enables automation of all stages of Network cabling design as part of an integral building system. It supports correct deployment of equipment and technology of world network cabling vendors. Explanatory notes, specifications, wiring lists, bills of materials, estimation of costs, rack design schemes, building plans, cable registers, conduits registers are now formed automatically.

***In this section of our presentation all the features of the software are listed within the following categories:***

- Options setup
- Help
- Engineering serviceability
  - Initial floor plan
- Project manager
- Component library
- Directories
- Wizards
- Resulting schemes generation
- Legal report generation





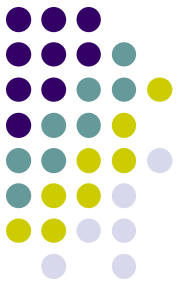
## 3. Cable Project CAD capabilities

### *Options setup*

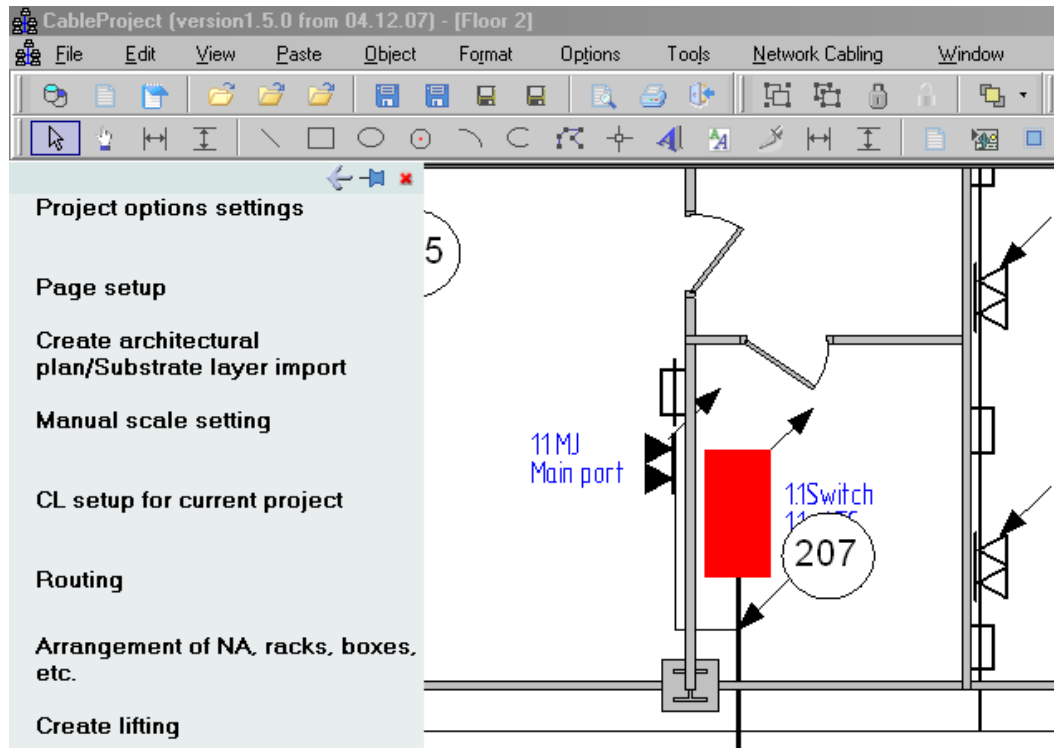
- The setup of initial tagging for different types of components. This enables automatic assignment of the object height
- Page templates editing
- Creation of user page templates for further use
- Page alignment: landscape, portrait
- Page template format setting: Simple, Advanced, Extensive
- Scale and grid spacing setup
- Default font setup
- Use of guidelines

### *Help*

- Interactive “Basic toolbar” helps to become acquainted with the basics of Network Cabling Design and the use of the software.

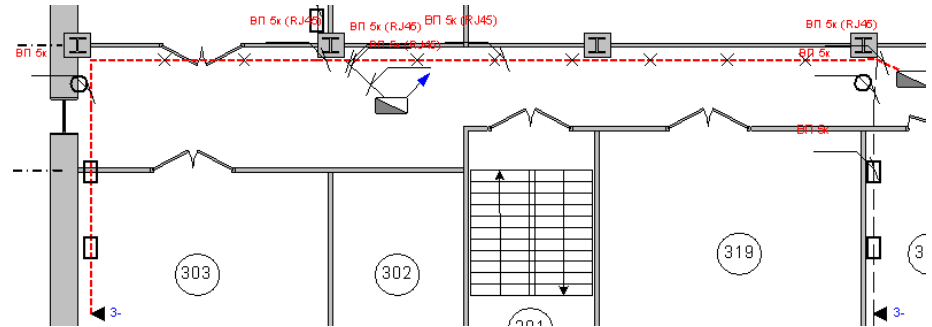
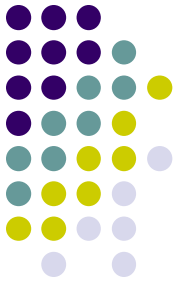


### 3. Cable Project CAD capabilities



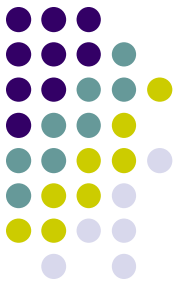
- Extended help system includes context help functionality.
- Availability of short help windows for options and settings installation

# 3. Cable-Project capabilities



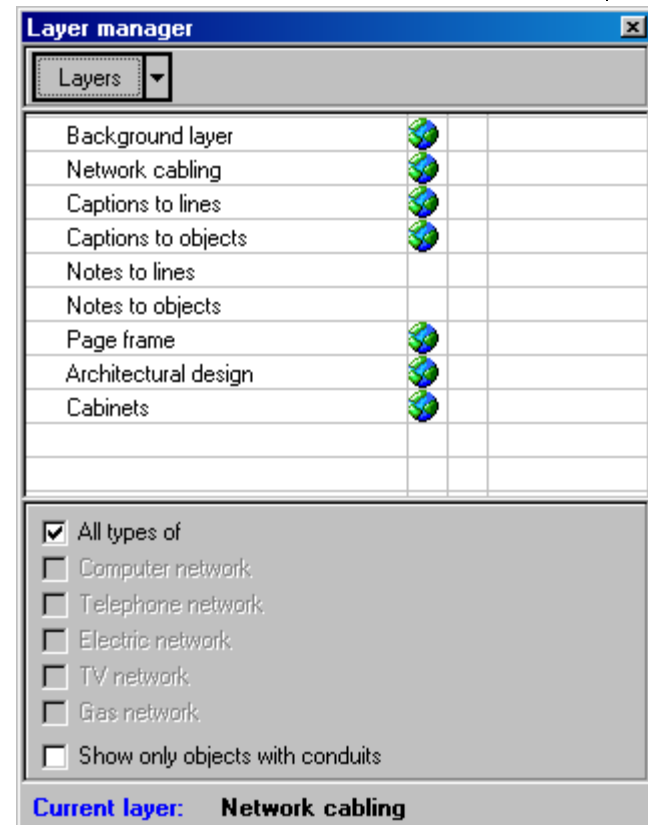
## Engineering serviceability

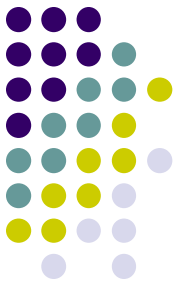
- Software interface options
  - Display project manager, components library, scale and grid
  - Assigning: to the grid, to the guidelines, to the closest object.
  - Display the occupancy of point objects and cable interfaces
  - Display conduit occupancy and conduit elements.
  - Display routes that have exceeded length
  - Disabling locked object dragging function
  - Scale setting
- Placement of the network cabling components on the page using the “Placing without Drag&Drop” mode
- Right angle changing of graphic symbols on drawings.
- Route selection to terminal object.



### 3. Cable Project CAD capabilities

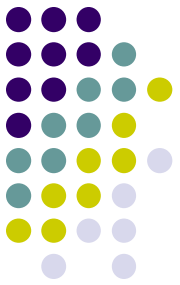
- Protocol field event log.
- Page navigator
- Each of the following operations is made on the appropriate layer.
  - Ground layer - for floor plan designing
  - Basic Network Cabling – for network cabling construction
  - Line tag – length and height of the route
  - Object tag – all tags for network cabling components on the page
  - Line notes - tagging a route with a conduit
  - Object notes – component and its composites name in window
  - Page frame – page frame and template creation/editing
  - Architectural engineering - for architectural plan creation.
- Creation of custom layers for additional needs





### 3. Cable Project CAD capabilities

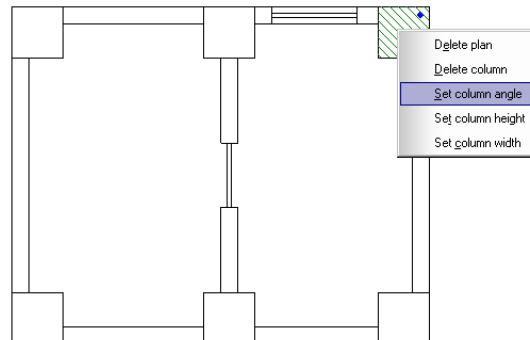
- Object grouping (enables group scaling)
- Object duplication using “Ctrl”
- A set of object duplications using ”Ctrl + D” or pop-up menu
- Automatic object alignment to grid
- Page frames and templates corresponding to GOST
- Creating of interfloor risers on routes
- Selection of tag placement for point object
- Setting of each component height by default
- Change of tag placement and explanatory note arrangement
- Placing of multiple objects on different heights (one over another)
- Visual cabinets displays tagging rules and grouping of components in project manager.
- Client-server database allows multi-user work with a single component library and project manager

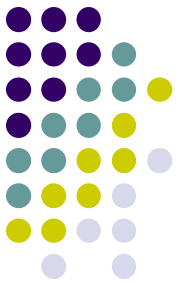


## 3. Cable Project CAD capabilities

### Initial floor plan creation:

- Plan designing using standard primitives (lines, rectangles, circles, arcs, etc.) and tools like “Architectural plan”, ”Segment”
  - Segment detachment
  - Segment width adjustment
  - All segments width adjustment
  - Adding windows, doors and columns
  - Segment lines thickness and style adjustment
  - All segment lines width adjustment
  - Segment line length displaying adjustment





## 3. Cable Project CAD capabilities

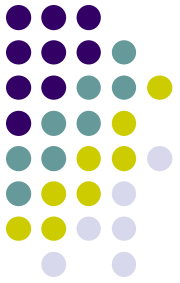
- Architectural plan saving and loading, import \*.dxt format (data exchange format - standard for CAD applications), available for loading \*.wmf files or using the clipboard
- Rapid scale sizing
- Movement of objects to the top/bottom of the riser
- Several types of dimensional help windows

### ***Project manager***

- Applying properties for all similar components in the project manager

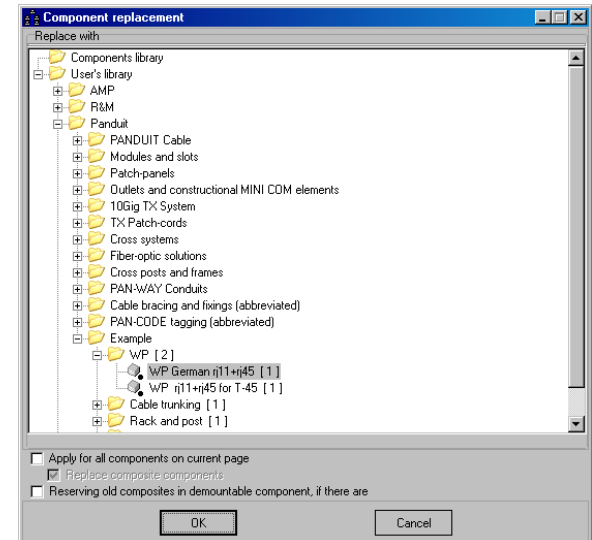
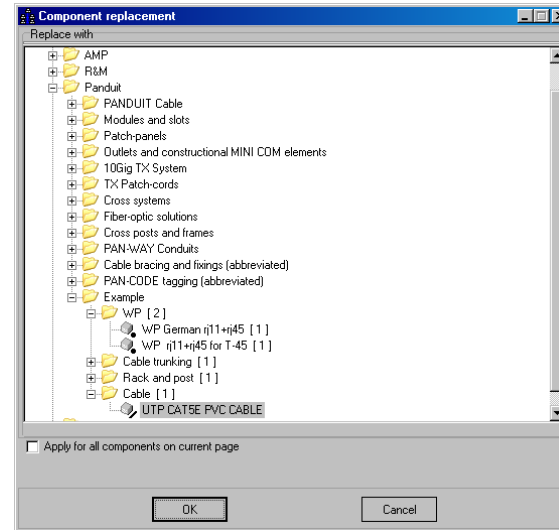
Component properties dialog box showing various configuration options for a cable component.

#	#	NAME	Quantity	Connections	Type	View	GENDER	Occupe
▶ 1	1	Вигая пара	4	4	Operational	Split	Male	<input checked="" type="checkbox"/>
2	1	Вигая пара	4	4	Operational	Split	Male	<input checked="" type="checkbox"/>
3	1	Конструктив кабеля	1	0	Constructive	Split	Male	<input type="checkbox"/>



### 3. Cable Project CAD capabilities

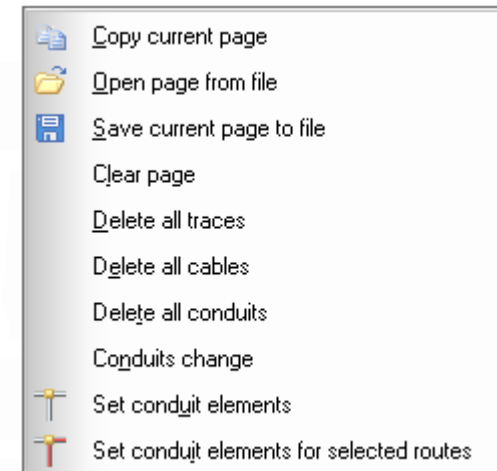
- Replacement of linear components on a separate area and on a whole page
- Replacement of point components separately and on the whole page With optional change of its composites
- Including the option “Leave old composites in the exchangeable component, if applicable”

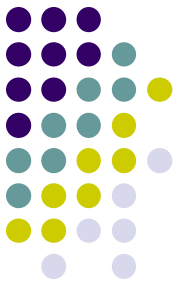




### 3. Cable Project CAD capabilities

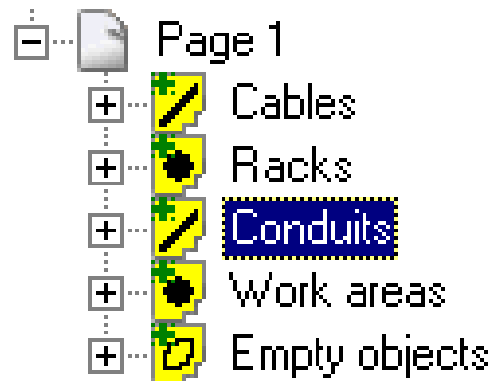
- Changing composites of the component in project manager
- Page copying, within one project and between different projects
- Page saving/loading to/from the file
- Clear page function
- Delete all cables function
- Delete all conduits function
- Change conduits, which are filled more than the allowed percentage on the current page
- Installing conduit elements automatically (blinds, tee-fittings, adapters, etc.)



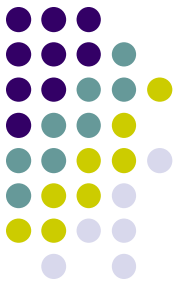


### 3. Cable Project CAD capabilities

- Grouping Network Cabling elements in Project Manager



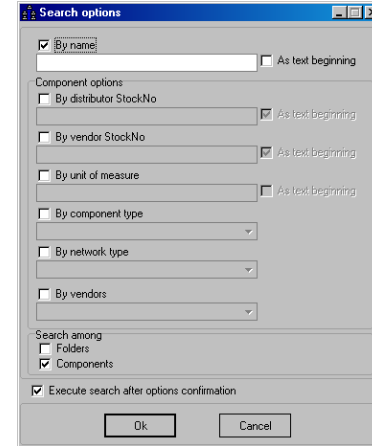
- Saved projects file backup
- Export pages to \*.BMP and \*.WMF
- Ability to transfer graphic symbols for route
- Components transfer from project manager into components library.



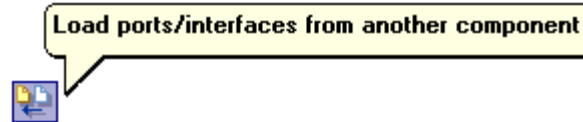
## 3. Cable Project CAD capabilities

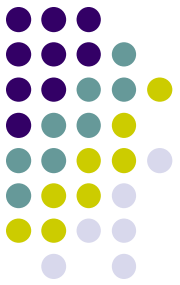
### ***Component library***

- Properties application for all components of the current folder in the component library
- Advanced search of components in the component library and project manager



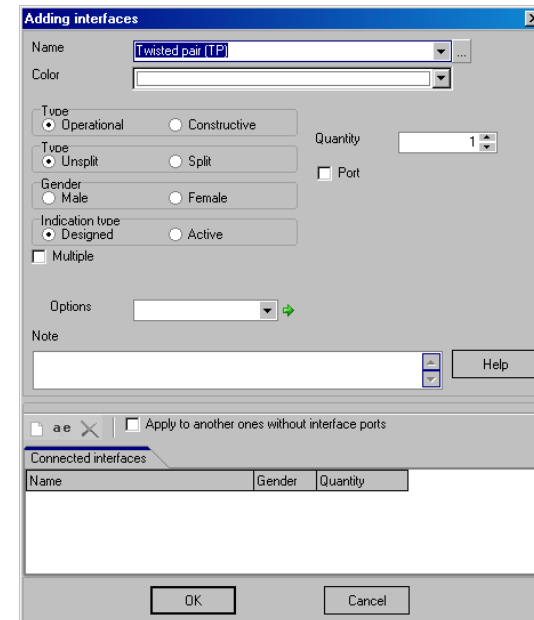
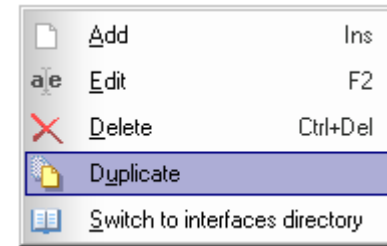
- Import of interfaces of components with identical names

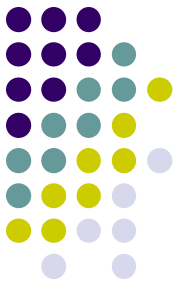




### 3. Cable Project CAD capabilities

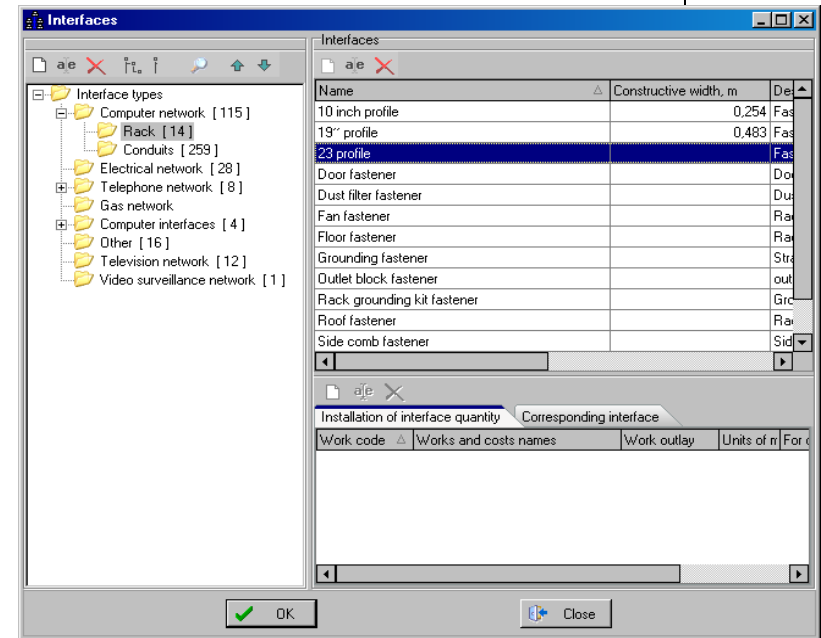
- Adding, editing, deleting, copying component interfaces
- Fast switching into interface directory from the list of the component interface
- Group handling of interface connection to the port
- Ports and interfaces connection enables more flexible configuration of components for better specification of inner connections (specified connections that are reported in legal reports)



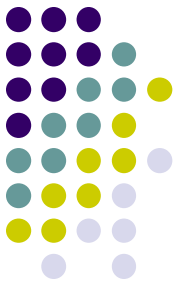


### 3. Cable Project CAD capabilities

- Adding the estimate tasks/costs directly at interface
- Estimate tasks/costs replaced if the component includes an additional one
- Adding composites to the component related to constructive interfaces
- Connection of composites between themselves
- Saving of operational interfaces and ports with the default position

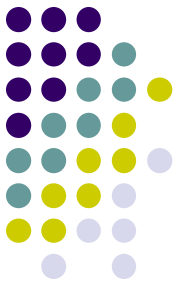


- Connection of interfaces inside the component



### 3. Cable Project CAD capabilities

- Interface directories stored together with the estimate/costs for each project
- Conduit elements linking to cables in the “Conduit elements” tab
- Enables completing the rack with component indicated patch-cords
- Component control installation for arrangement and connection
- Restriction of favorites editing
- Connection control considering the type of network and vendor
- Control considering the assembly of component properties
- Component display of zero price color adjustment in the component library and project manager
- Group operations and component library updates
- Graphic symbols for components: twin, triple, etc.
- View the list of connected and not connected components with automatic switching into the project manager
- Connected/not connected point and linear components
- Cables not inside conduits

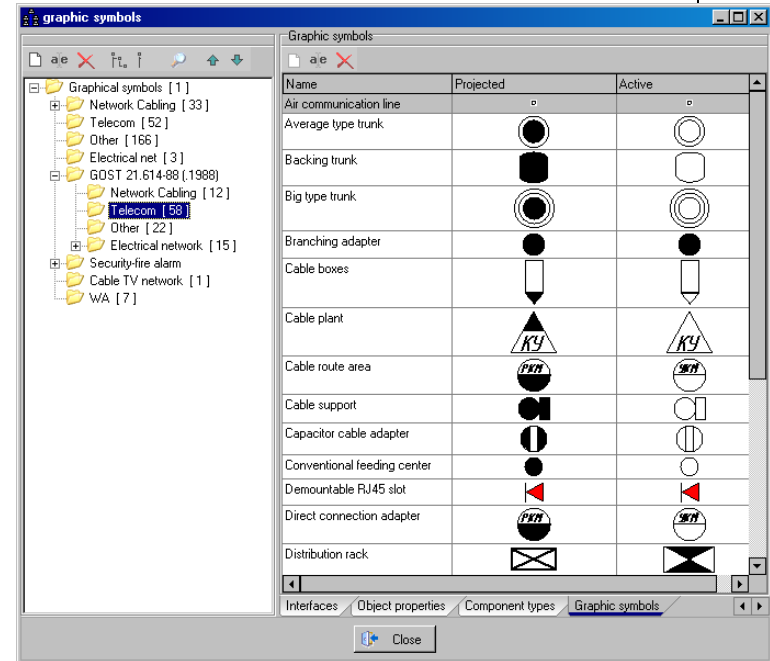


### 3. Cable Project CAD capabilities

- Component library contains the following vendors: Panduit, R&M, AMP, Legrand, DNC, Cablofil, Estap, EfaPel, EuroLan, Molex, 3com, AlliedTelesyn, Corega, D-Link, NetGear, Nortel. The list of vendors is constantly growing.
- Terms and conditions and updating of prices depending on packaging (box, spool, etc.)
- Wizards included for various types of components

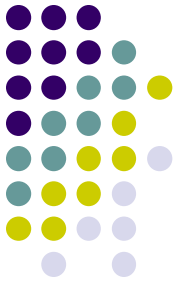
#### **Directories**

- Directory of graphic symbols according to GOST



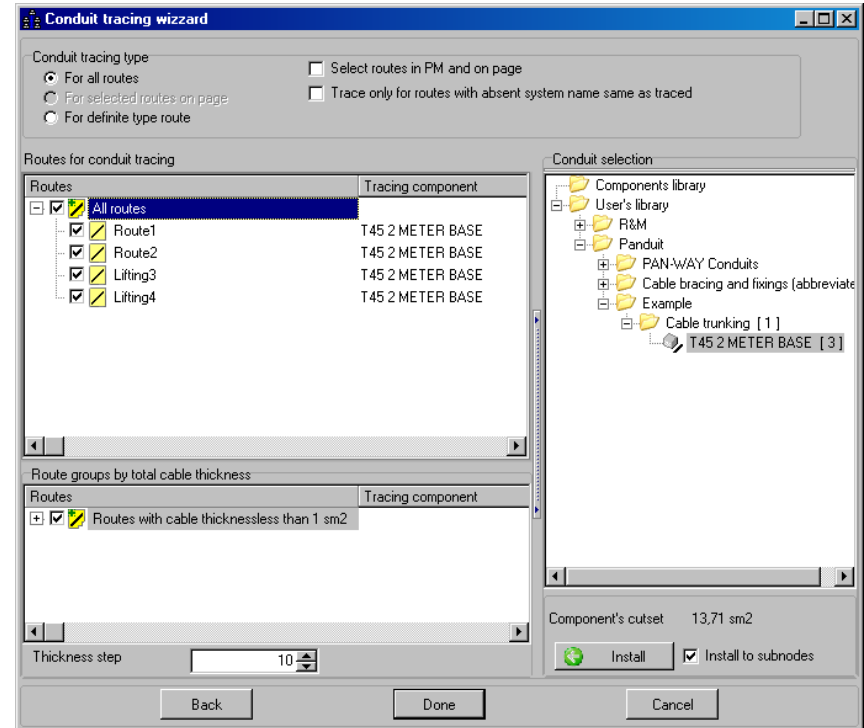
- Directories: currency, network types, vendors, interfaces, object properties, graphic symbols, estimate tasks, resources, supply types, VAT or other tax rates.

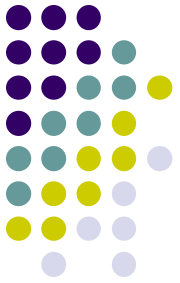
# 3. Cable Project CAD capabilities



## Wizards

- Network cabling and conduit cabling wizard
  - To all routes
  - To selected routes
  - To indicated route types
    - Vertical route (risers)
    - Horizontal route
    - Route on a set height
    - Route on a point object height
    - Route on a floor (height = 0)
    - Interfloor and plug route
    - Ceiling route (height = ceiling height)
    - Drop ceiling route
    - All other routes
  - Interactive route selection in the project manager and on the page
  - Installing of cable quantity for selected cable type on any route section

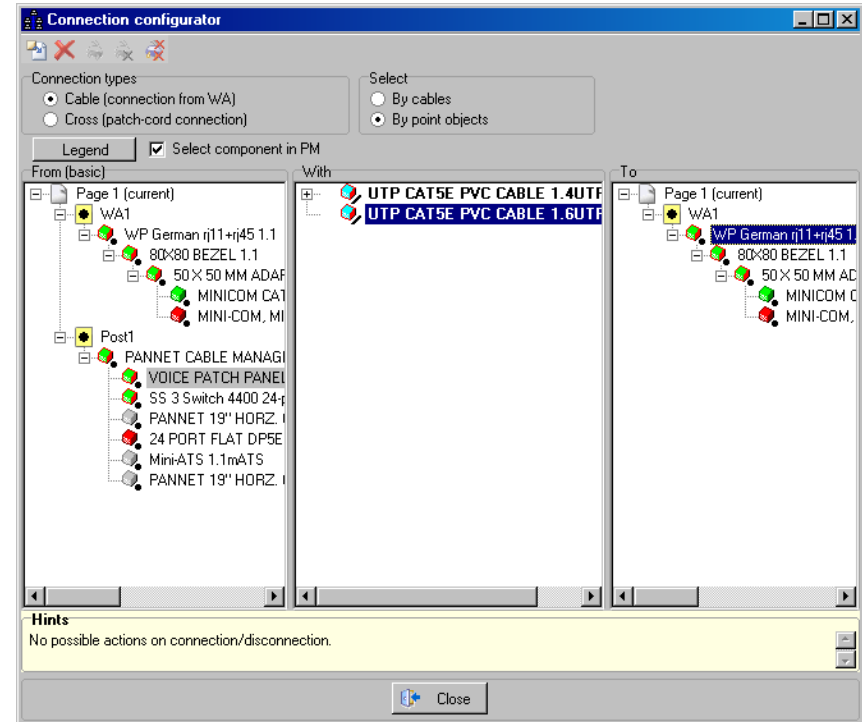


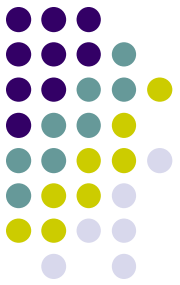


## 3. Cable Project CAD capabilities

### Connection configurator

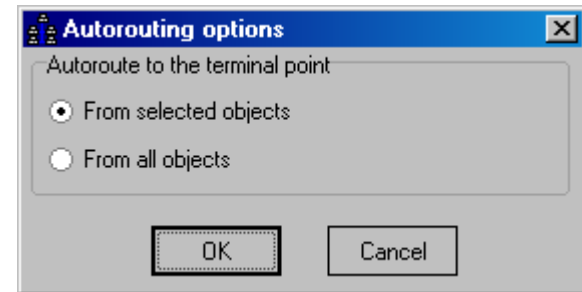
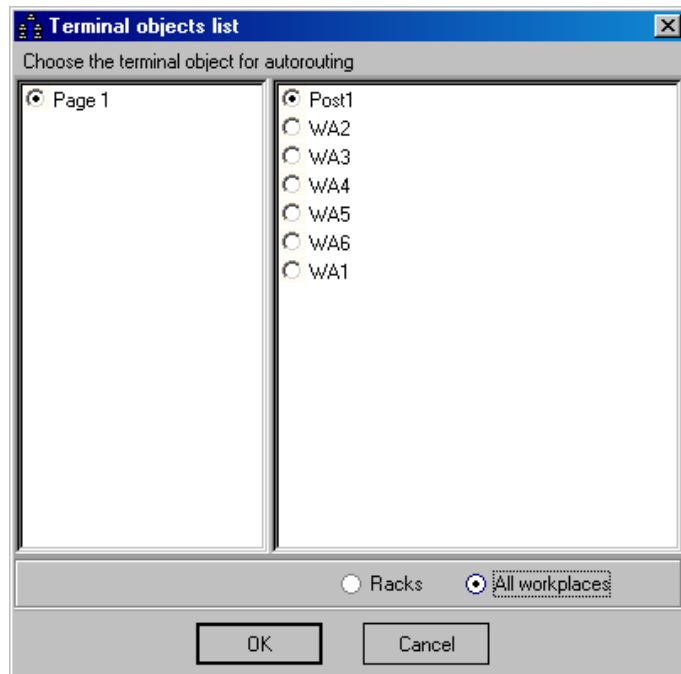
- Connection type
  - Cable (connection from WA)
  - Cross (patch-cords connection)
- Linear and point objects selection
- Enables removal and installation of connections directly in connection configurator
- Full control of the connection on one page and between pages (interfloor connections)
- Connection configurator components installed from the components library
- Enables configuration of connections directly on the selected object

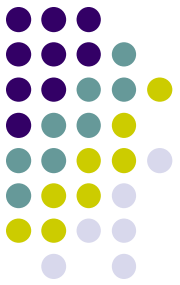




### 3. Cable Project CAD capabilities

- Cable autorouting from the determined work areas to the selected terminal object (rack, for example) for the whole project and for the selected object or group of objects.
- Generation of a component list that could be a terminal object

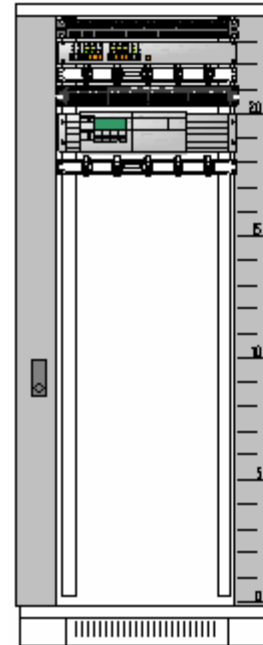




## 3. Cable Project CAD capabilities

### *Resulting design generation*

- Automatic creation of the rack design on a separate page with the ability to control font and window size
  - Component title
  - Scale
  - Height record
  - Size fitting
  - Sizing
  - Print

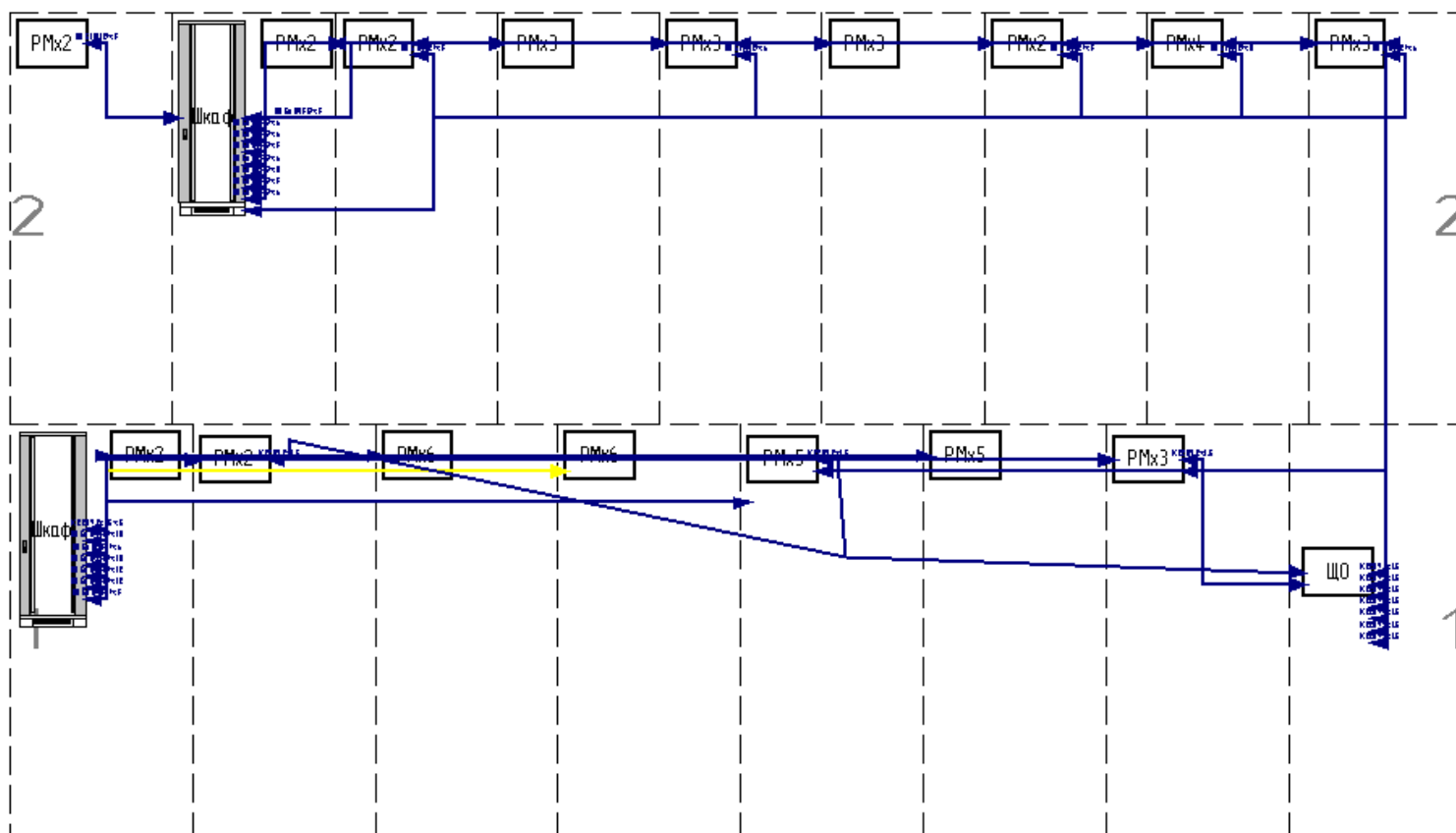


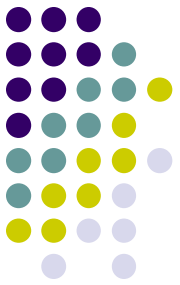
VOICE PATCH PANEL 56&A; PP cat3 25WRJ45;  
SS3 Switch 4x100 24-port 10/100; Switch 24-port 10/100; 115 Switch 24-port 10/100  
PANNET 19" HORZ. CABLE MGR. TRUF RONT ONLY; 01q: 1.101q;  
24-PORT FLXT OPSE DATAPATCH PANEL; PP cat5e 24WRJ45;  
MINI-ATC; mATC; 1.1mATC  
PANNET 19" HORZ. CABLE MGR. TRUF RONT ONLY; 01q: 1.201q;



### 3. Cable Project CAD capabilities

- Creating a page with the building draft (building topology)



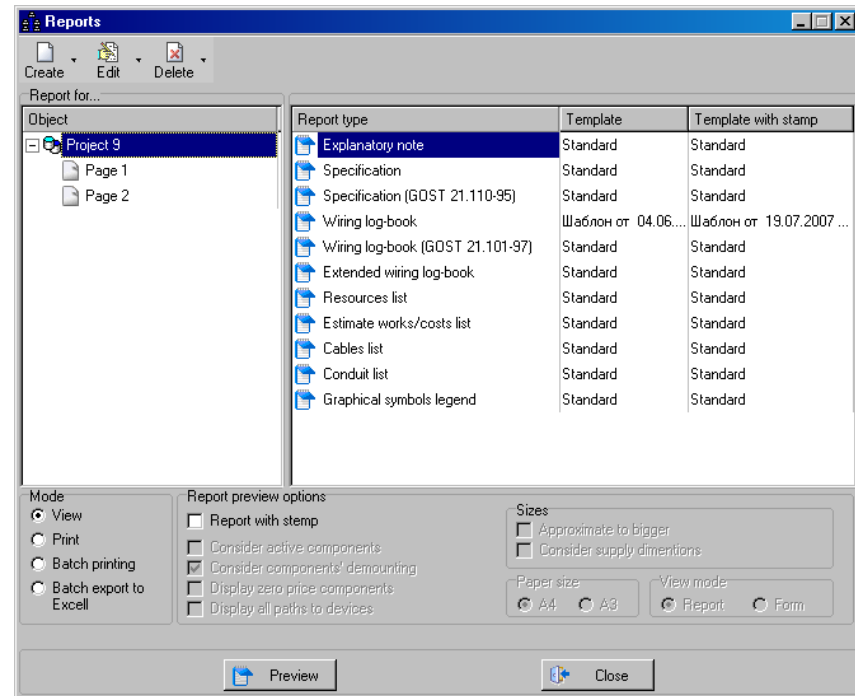


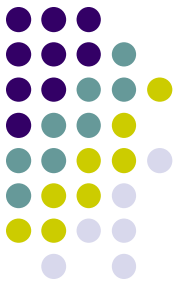
## 3. Cable Project CAD capabilities

### **Legal report generation**

• Network Cabling Design results in automatically generated designs and legal reports:

1. Explanatory note
2. Specification
3. Specification (GOST 21.110-95). Available in A4 and A3 formats
4. Wiring list
5. Extended wiring list
6. Bill of materials
7. Tasks/costs estimate
8. Cable register
9. Conduits register
10. Legend





### 3. Cable Project CAD capabilities

- Document printing, editing, saving/loading
- Document export to MS Excel®
- All project reports can be generated for whole project and for the selected page
- Operative only components estimation report
- Report of zero price components
- Two types of bill of materials are available: printer report and edit form

The screenshot shows a software window titled "Resourse list - Page 2" with a table of components. A context menu is open over the table, showing options "Replace components" and "Delete components".

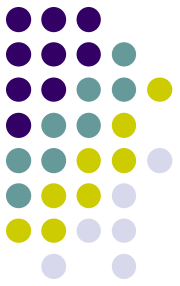
#	Name	Vendor stockNo	Distributor stockNo	Vendor	Unit of measure	Quantity	Pr
1	24 PORT FLAT DPSE DATAPATCH PANEL	DP245E88TGY	DP245E88TGY	Panduit_New	p.	1	
2	50 X 50 MM ADAPTERWITH SLOPED 1/2 INSERT	CFPAGS2AWY	CFPAGS2AWY	Panduit_New	p.	6	
3	80X80 BEZEL	FCFPAW	FCFPAW	Panduit_New	p.	6	
4	CAT 5 PATCH CORD WITHHIGH PERFORMANCE MOD PLUG	UTPCH1MY	UTPCH1MY	Panduit_New	p.	24	
5	CAT 5 PATCH CORD WITHHIGH PERFORMANCE MOD PLUG	UTPCH1MBLY	UTPCH1MBLY	Pand.		25	
6	Mini-ATS			Panasonic	p.	1	
7	MINICOM CAT5E JACK MODULECAT 5E, 8 POS, 8 WIRE UNIVERSAL MODULE	CJ5E88TGAW	CJ5E88TGAW	Panduit_New	p.	6	
8	MINI-COM,	CJ64IWY	CJ64IWY	Panduit_New	p.	6	

General cost: 4 366,480

Buttons: Ok, Apply, Cancel

- Generated bill of materials: all data available for editing, deleting and item position change

## 4. Terms and conditions, service and other options



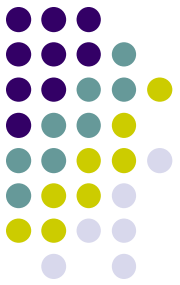
Cable Project CAD is available via download.

Purchasing includes technical service with e-mail technical support and free updates for 6 (12) months. Updates for the next versions (2.X, 3.X ...) for users of version 1.X will be supplied with discounts until the new version release.

Future developments will include:

- Development of a separate module for designing inner distributive and main telecommunications networks (Telecom CAD).
- Extending the component library for different vendor network cabling components.

## 4. Terms and conditions, service and other options



- Applying electrical network design specifics
- Developing functionality for inner coaxial networks (cable TV)
- Applying specifics of designing security and fire systems
- Developing system for designing heating, sewage and water systems

You can express your preferences by e-mail:

[info@cableprojectusa.com](mailto:info@cableprojectusa.com)

Details are available on our website:

[www.cableprojectusa.com](http://www.cableprojectusa.com)

If you are interested in purchasing CableProject CAD, please call our sales department:

Tel:- 407 921 8510

We are available from EST 4:00 a.m. to 9:00 p.m

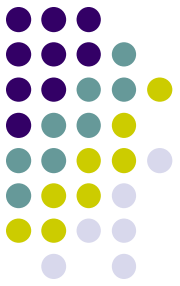


## 5. Summary of benefits

Cable Project CAD enables automation of all Network cabling designs. It contains an extended and updated component library, which includes not only a general data classification, but also design characteristics for all products. This helps to control the assembly and automation of connecting all project details as specified by the vendor. The design of the software enables real time visual development of all projects while creating all report documentation automatically.

### ***User benefits:***

**Complex approach:** Full automation of the processes of Network Cabling designing and estimation. Designing and parameterization will enable rapid project development, fundamentally improve the quality of current projects, control installations and implementations, performing economic analysis and better enable the selection of equipment.



## 5. Summary of benefits

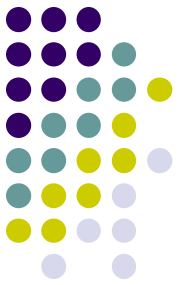
**Usability:** Intuitive interface, the use of standard templates, wizards and ready-to-use examples. No requirement for additional study by the design professionals

**Compatibility:** The capability of using already prepared designs, plans and drafts, created in other CAD software. Compatible with different CAD/CAM formats (\*.dxf, \*.dwg, \*.wmf, etc.).

**Update services:** Timely component database updates including prices and other characteristics.

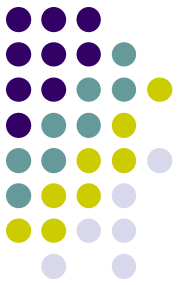
**Engineering serviceability:** Convenient design and presentation of Structured Cable Systems as a separate infrastructure.

**Database:** Extensive database of elements for all major vendors (R&M, Panduit, AMP, RIT, Molex, CONNEX, etc.) including prices



## 5. Summary of benefits

- **Rapid design:** Parametrical design will enable the use of prepared projects as templates. The capability of configuring assemblies (blocks of outlets, cross-panels, control cabinets, etc.) for use in other projects. Automatic tagging of assemblies and areas of Network Cabling in accordance with the chosen template.
- **Error control:** Complete control of all connections and plans will greatly reduce errors in the design stage. Easily reviewing all processes during the design will enable the designer to avoid future mistakes.
- **Preparing the estimate:** Real time calculation of prices of all cables and conduits. Export of price details into the construction estimation software.



## Contact information

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[info@cableprojectusa.com](mailto:info@cableprojectusa.com)