

USERS GUIDE
for CBM Component Database

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The purpose of the system

The goal of the development the CBM *Component database* is the complex automation of accounting and monitoring the equipment of CBM facility. The information system is designed to store and access information on installing detectors.

The information system is created and developed on the base of the documents:

1. Conceptual Considerations for CBM Databases, E.P. Akishina¹, E.A. Alexandrov¹, I.N. Alexandrov¹, I.A. Filozova¹, V. Friese², V.V. Ivanov¹, W. Müller², P.V. Zrellov¹
¹LIT JINR, Dubna
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2. User Requirements Document of the Component DB for the CBM experiment

Software

- DBMS PostgreSQL v8.4.20
- PHP v2.3.0
- Apache v2.2

Basic services

- View the information about the components of the detectors;
- Search in navigation mode;
- Insert the information about the components of the detectors;
- Edit the information about the components of the detectors;
- Support the catalogs;
- Authentication and authorization service for access to system content based on affiliation to the appropriate group.

Brief description of content

The system stores the information about the detectors, tests results, production companies, delivery status, batches, qualities of the components.

System interface

Web-interface gives the appropriate convenience and speed level, allows to work with system from any place with internet access, and it is possible to reach the info from the mobile devices. The user only needs the internet browser for working.

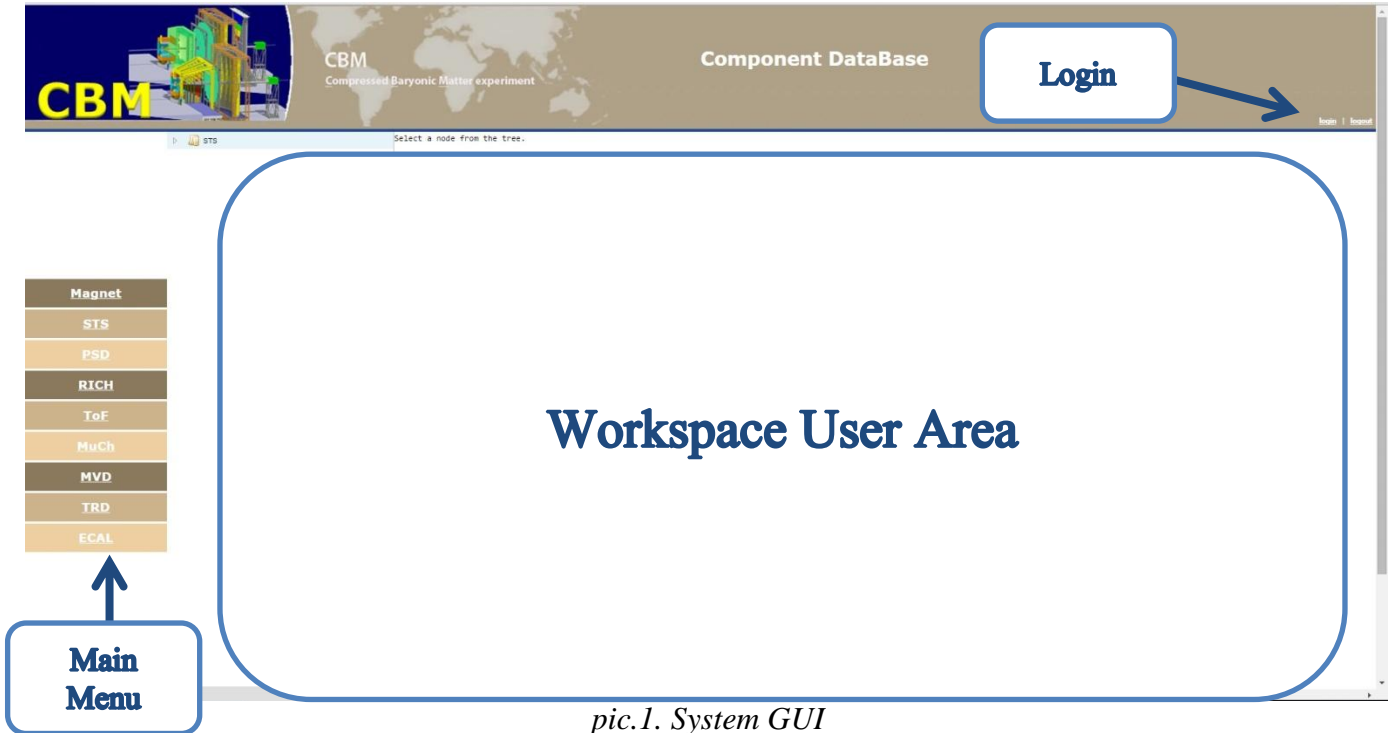
The user interface is presented by several blocks (pic. 1): the main menu (for navigating through the detectors), authorization block, main window (for viewing and editing information).

How to use the system

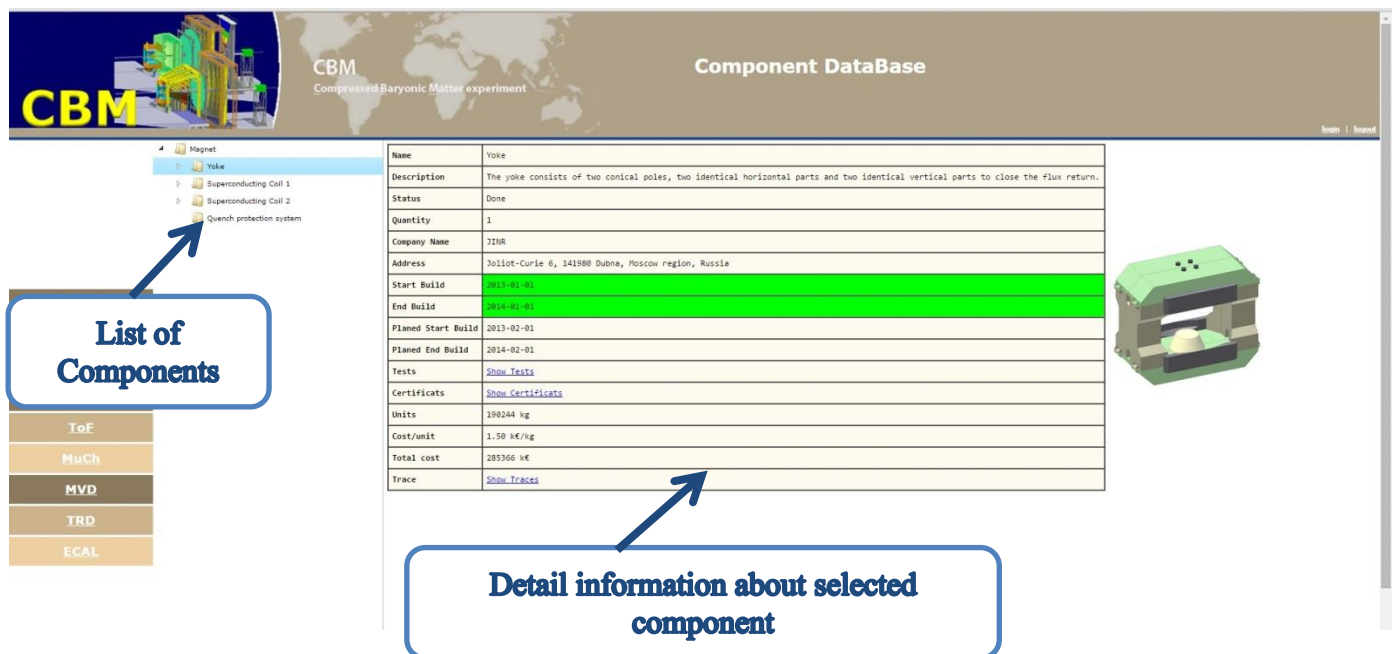
Put the link <http://cbmdb.jinr.ru/sts/main.php> to the web browser. The navigation is based on the components' tree structure. The root is the corresponding part of the facility– *Dipole Magnet*,

Micro-Vertex Detector, Silicon Tracking System etc. The list of the components is displayed in the tree on the left. If you click the component then the information regarding it became available. You can see it on the right at the table (pic.2.).

The authorization is needed for inserting and editing the data. You need to click *login* at the right top, type your *Login* and *Password*, then click *OK*. Test mode allows to use *Login/Password* guest/12345 (pic.3.).



pic.1. System GUI



pic.2. View



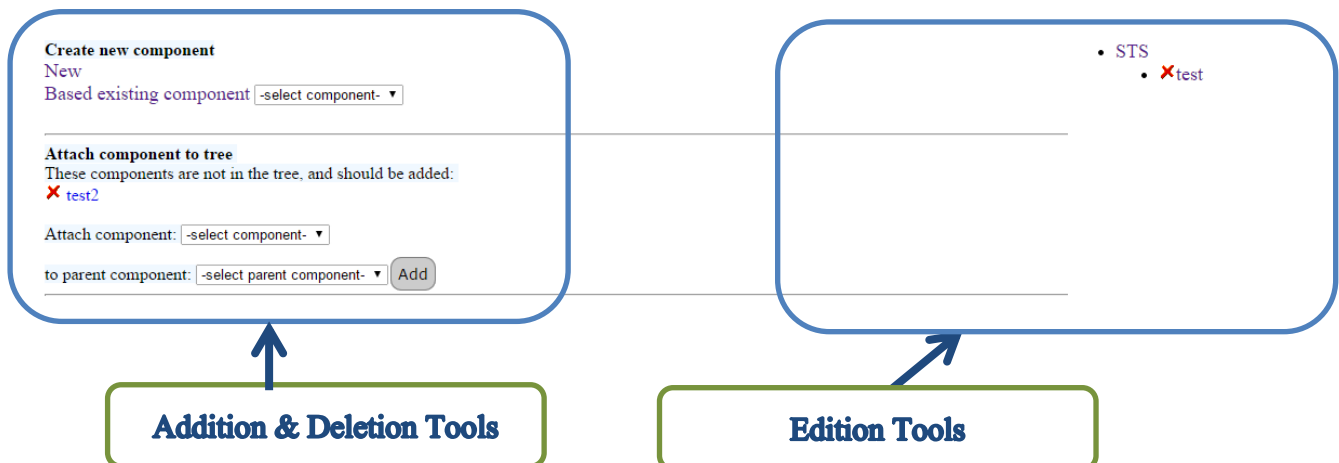
pic.3. Authorization

Information service for authorized users

Authorized users can do:

- Editing
- Inserting
- Deleting
- Supporting the catalogs

For switching in Editing Mode click *Edit* at the right top. Then the screen appears as on pic.4.

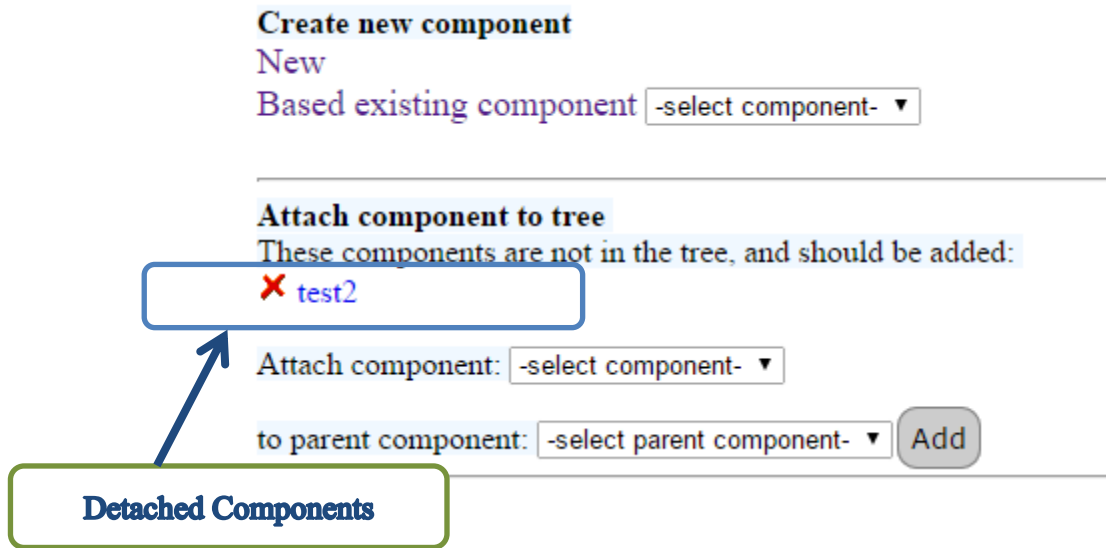


pic.4. Modification Mode

You can insert and delete the components on the left part of the screen and edit on the right.

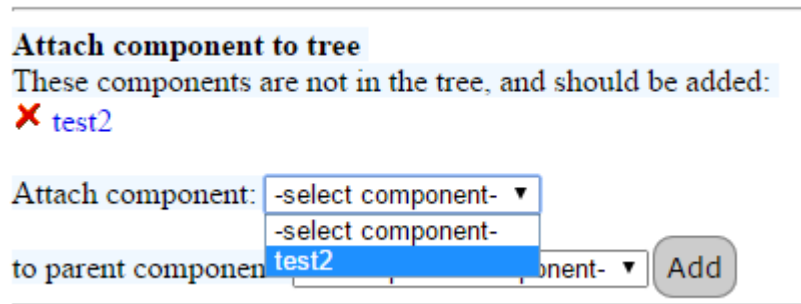
The Component editing

The tree view of the components is presented on the right part of the screen. Click **X** at the left of each component for detaching it from the tree. It will be transferred to the list of Detached components. You can attach the detached component to the tree at any time (pic.5).

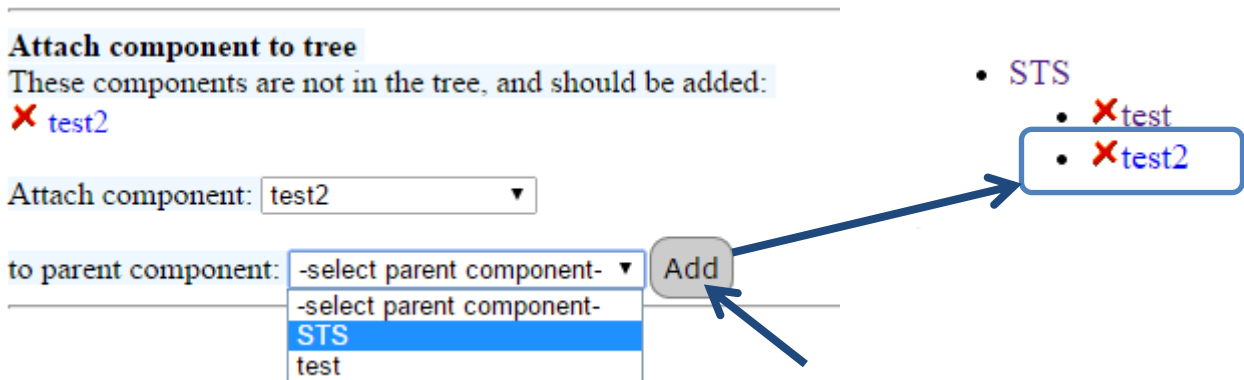


pic.5. Attach Tool (1)

For attaching the component to the tree, select it from the list of the components and then select the parent component from the list below. Click *Add* and the selected component appears at the tree on the right. (pic.6-7).



pic.6. Attach Tool (2)



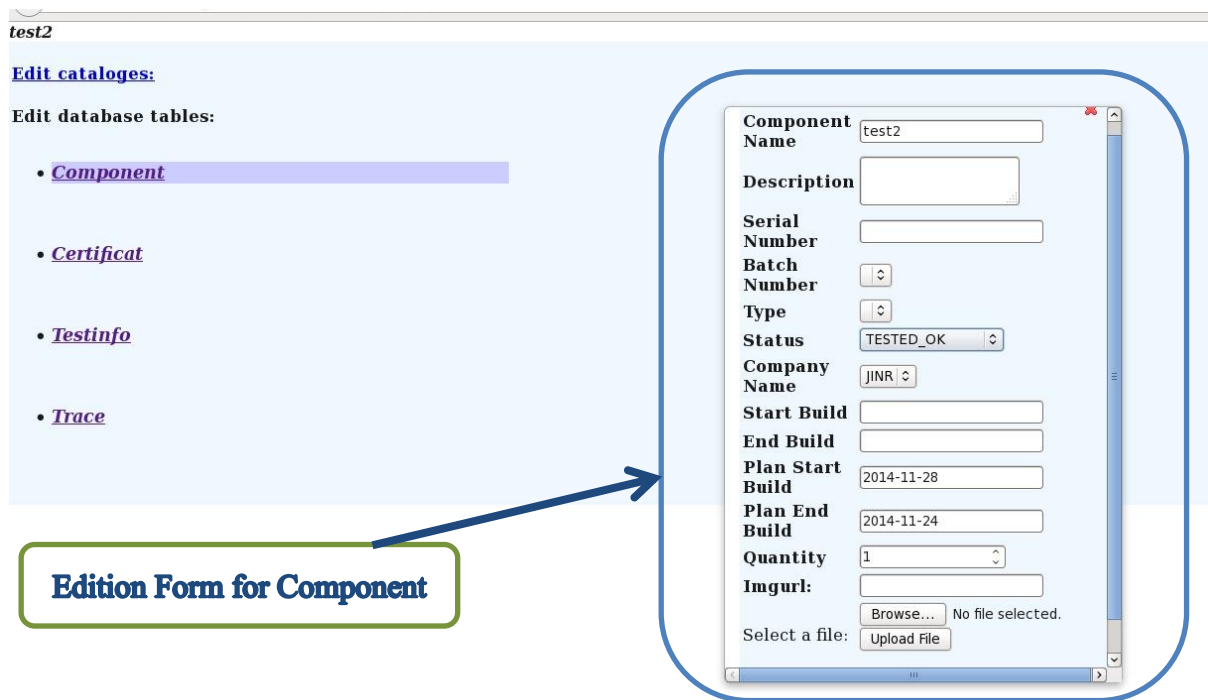
pic.7. Attach Tool (3)

For editing the data of the existing component, click on it (pic.8).

- STS
 - ~~test~~
 - ~~test2~~

pic.8. To Edit

You will see a list of the components' data for editing on the next page such as: information about the component, the tests, the certificates, the trace (delivery status) (pic.9). Click on the desired position and the form for editing appears. In this form you can edit or enter the data. You can find the description of the fields in Table 1. Click *Submit* button below for approving the changes, click ~~✗~~ or *Cancel* button for return. All the changes are available in the database immediately.



Pic.9. Edition Mode

Table 1. The Component Form

Field name	Description	Mandatory	Comments
Component Name	Unique name of the component	yes	
Description	Brief description of the component	no	
Serial Number	Serial number of the component	no	
Batch Number	Batch number of the component	no	
Type	Category of the component	no	
Status	Status of the component	yes	
Company Name	Production company name	yes	
Start Build	Start date of the production	no	
End Build	End date of the production	no	
Plan Start Build	Planned Start date of the production	no	
Plan End Build	Planned End date of the production	no	
Quantity	Quantity of the components	yes	The default quantity is 1
Imgurl	Link to the image of the component	no	Specified after loading the image

Creating a new component

You can create a new component in two ways: create a totally new component (*New*) or create a component on the base of the existing component (*Based existing component*) (pic.10.). In the first case you will see the same form as for Editing. The second case is useful when the new component has most of the characteristics as the existing component. In this case you should select the appropriate component from the dropdown menu and then click *Based existing component*. The next steps for filling-in the form are the same as described before (pic.9).

The screenshot shows a web form titled "Create new component". It has two main options: "New" and "Based existing component". Under "Based existing component", there is a dropdown menu with options: "-select component-", "-select component-STS", "test" (highlighted), and "test2". Below this is a section "Attach component to tree" with a text box containing "These components are not in the tree, and should be added:". Further down, there is a field "Attach component:" with a dropdown menu "-select component-". At the bottom, there is a field "to parent component:" with a dropdown menu "-select parent component-" and an "Add" button.

pic.10. New Component Inserting

Description of the catalogs

For many components the information on the production companies, ordered batches, quality criterias is relevant. The catalogs are organized for the effective work with the following information:

- ✓ Catalog of the Production Companies (Table 2.)
- ✓ Catalog of the Components categories (Table 3.)
- ✓ Catalog of the Batch numbers (Table 4.)
- ✓ Catalog of the possible Statuses (Table 5.)
- ✓ Catalog of the Quality Measurement Units (Table 6.)
- ✓ Catalog of the Quality Criteria (Table 7.)

Table 2. Catalog of the Production Companies

Field	Description	Comments
pcid	Service field	Assigned automatically
pcname	Full name of the company	
codename	Shirt name of the company	
address	Address of the company	
description	The description of the company	необязательное

Table 3. Catalog of the Components categories

Field	Description	Comments
ctid	Service field	Assigned automatically
value	Value	
description	Description of the category	

Table 4. Catalog of the Batch numbers

Field	Description	Comments
exip	Service field	Assigned automatically
pcid	Link to the Production Company	

value	Value	
pdate	Date	

Table 5. Catalog of the possible Statuses

Field	Description	Comments
sid	Service field	Assigned automatically
value	Value	
description	Description	

Table 6. Catalog of the Quality Measurement Units

Field	Description	Comments
qumid	Service field	Assigned automatically
code	Code of the Measure Unit	
name	Name	

Table 7. Catalog of the Quality Criteria

Field	Description	Comments
qcid	Service field	Assigned automatically
qname	Name of the criteria	
qumid	Link to the Quality Measurement Unit	

Editing of catalogs

The editing procedure is unique for all the catalogs. Click the link with Catalog Name and you will see the form with the content of the Catalog (pic.11.).

pcid	pcname	codename	address	description		
1	JINR	JINR	Dubna		Submit	X
2	GSI	GSI	Darmstsd		Submit	X

Cancel Add

pic.11. View of Content Catalog Companies

Click *Add* button for adding a new entry to the Catalog. The string for entering the elements appears (pic.12.). Insert the data and click *Submit* button. The entered data will be shown in the form (pic.13.).

pcid	pcname	codename	address	description		
1	JINR	JINR	Dubna		Submit	X
2	GSI	GSI	Darmstsd		Submit	X

pcid X


Cancel Add

pic.12. Addition New Company (1)

pcid	pcname	codename	address	description		
1	JINR	JINR	Dubna		Submit	✕
2	GSI	GSI	Darmstsd		Submit	✕
3	XXXXXXXX	XX	Rome		Submit	✕

Cancel Add

pic.13. Addition New Company (2)

Click  for deleting the entry from the Catalog. Point the mouse to the desired entry, so it becomes available for editing – a blue frame appears (pic.14). Click *Submit* button after entering the data.

pcid	pcname	codename	address	description		
1	JINR	JINR	Dubna	some text	Submit	✕
2	GSI	GSI	Darmstsd		Submit	✕

Cancel Add

pic.14. Record Edition