



Holon Test Center: Group 1

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Holon

Overview

- When the user runs the application, all Holon Objects, Switches, Power Sources & Power Lines are loaded from the database.
- The user can reset the database by clicking Reset Database (☰ → Reset Database) or can clear the map by clicking Clear Map (☰ → *Clear Map*).
- To enable any functionality in the left menu, first disable already selected function by clicking on it then click on the menu item to enable the desired functionality. The color of the menu item will turn .
- Draw line double click snap
- **Two functionality in the left menu if enabled simultaneously may cause an error.**

Show Holon's

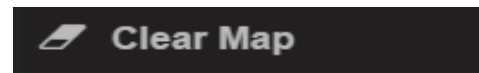
☰ → *Holon* → *Show Holons*



- Clicking on this item loads all the Holon's from database on the Map. This includes all Holon Objects, Power Lines, Power Sources, Disasters and Switches.
- Once Holon's are loaded user cannot load it again unless the map is cleared using *Clear Map* option.

Clear Map

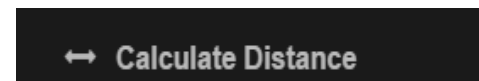
☰ → *Clear Map*



- This functionality helps the user to clear the map.

Calculate Distance between Two Points

☰ → *Power Line* → *Calculate Distance*

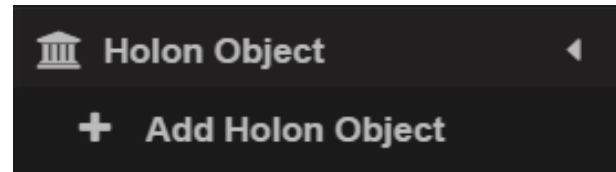


- This functionality helps the user to calculate the distance between any two points on the map.
- To enable this functionality, click on Calculate Distance.
- A pop up appears, Click Sure! To proceed ahead.
- Click at any point on the map. Again, select the second point.
- Click on Calculate distance.
- The distance between the two points will be shown.

Holon Object

Add Holon Object

☰ → Holon Object → Add Holon Object



- Clicking on this menu item user is enabled to add a new Holon Object on the Map.
- Click the point where user wants to draw the Holon Object.
- To end drawing the Holon Object, click again at a point.
- Holon Object is drawn.
- A pop up will open.

 A light blue dialog box with a title bar that says 'Add Holon Object'. Inside, there are two dropdown menus. The first is labeled 'Holon Object Type:' and has 'House' selected. The second is labeled 'Can Communicate:' and has 'Yes' selected. At the bottom, there are two buttons: 'Cancel' and 'Save Holon Object'.

- The pop up contains the following:
 - Holon Object Type defines the type of Holon Object. It can be a House, Restaurant, Hospital or Police Station.
 - Can Communicate “No” means that the Holon Object is not able to send or receive messages. The Holon Object cannot give energy (even if it is a producer) nor can it ask for energy (if it is a consumer). Also, Holon Coordinator cannot provide energy from this Holon Object (if it is a producer and can communicate is “No”) to other Holon Objects clicking Distribute Energy. (Click on Holon Object (Coordinator Only) → Info Window opens → Click on Distribute Energy)
- If the Can Communicate is “No”. The user is not able to send messages from and to that Holon Object.
- Save the Holon Object by clicking Save Holon Object.
- Clicking again on Add Holon Object item disables the functionality.

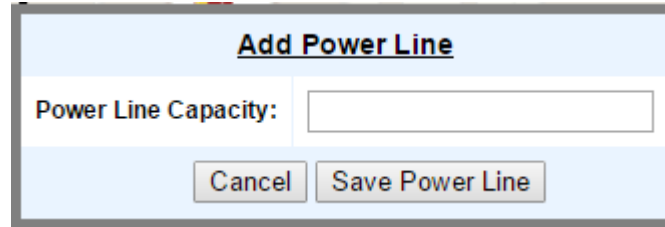
Connect Holon Object to Power line

☰ → Holon Object → Connect to Main Line



- Clicking on this option enables the functionality to connect a Holon object to a mainline* (already present) through a subline* on the map.
- Click on a Holon Object
- Click on Mainline (only) which is already present on the map.

- A popup will open.



A dialog box titled "Add Power Line" with a light blue background. It contains a text input field labeled "Power Line Capacity:" and two buttons at the bottom: "Cancel" and "Save Power Line".

- Save the subline by entering its capacity e.g. 100 or cancel it.
- If Save Power Line button is clicked, a subline will be drawn connecting Mainline to Holon Object.
- The color of the Subline will turn Brown if the line is successfully created in the database.

Check whether two Holon Objects are connected?

☰ → Holon Object → Are Connected?

⇄ Are Connected ?

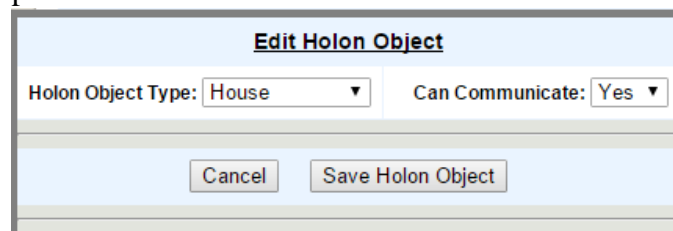
- This option enables the functionality to see whether two Holon Objects are connected or not.
- Enable this functionality by clicking on it.
- Click the first Holon Object then the second Holon Object, an alert message will be displayed whether the Holon's are connected or not, considering switches in between them.
- Also, if either the Holon Objects or any one of them lie inside a disaster, then also the Holon Objects are not connected.

Edit Holon Object

Click on Holon Object → Info Window opens → Click on Edit Holon Object



- Once a Holon Object is created using Add Holon Object from the left menu, we can edit the Holon Object.
- Click on created Holon Object. An Info window will be opened showing the details of the Holon Object. Click on the Edit Holon Object option in the info window to edit the Holon Object.
- A popup will open.



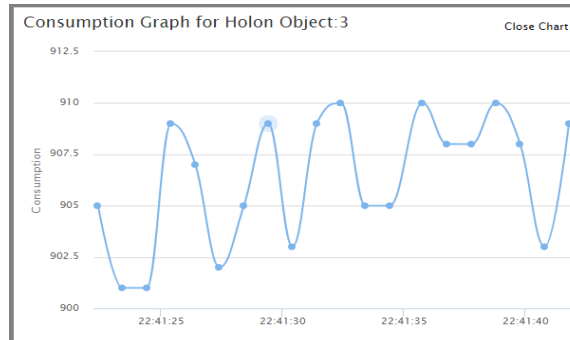
A dialog box titled "Edit Holon Object" with a light blue background. It contains two dropdown menus: "Holon Object Type:" with "House" selected, and "Can Communicate:" with "Yes" selected. At the bottom are two buttons: "Cancel" and "Save Holon Object".

- Click Save Holon Object to save the changes after editing the details of the Holon Object.

Show Consumption of Holon Object

Click on Holon Object → Info Window opens → Click on Consumption

- The total consumption of the Holon Object can be seen in a graph by clicking Show Consumption option of the Holon Object present in the info window of the Holon Object opened after clicking the Holon Object.
- Clicking this option opens the consumption graph.



- This graph shows the sum of consumption of all Holon elements present inside the Holon Object. Since, the value is fixed for the consumption. We have added a random number to show fluctuations.
- Close Chart present on the side of the chart, closes the consumption graph.

Show Supplier Details of Holon Object

Click on Holon Object → Info Window opens → Click on Supplier Details

- When the user click on this option, he is able to view the details of all the supplier who provided energy to Holon Object.
- Supplier can be a Holon Object (if it has a Holon element of type solar cell) or a Power source.
- The popup contains the list of all the suppliers which are currently providing or previously provided the power to the Holon Object.
- The popup contains

Power Supply Details for Holon Object Id: 1							
Request#ID	Type of Supplier	Id of Supplier	Power Requested	Power Granted	Message Status	Connected	Communication Mode
1	Power Source	1	100	100	ACCEPTED	true	via HOLON COORDINATOR
Close							

- Request Id (an auto increment number) specifying the id of the request.
- Type of Supplier field specify whether the supplier is a Power Source or Holon Object (containing a Holon Element of type Solar cell)

- Power Requested field specify the amount of power the Holon Object has requested from the Suppliers.
- Power Granted field specify the amount of power the supplier has granted to the Holon Object.
- Message Status are:
 - “Accepted”
This status means that the requirement of the Holon Object for power is fulfilled by the supplier.
 - “Pending”
This status means that the requirement is yet not fulfilled.
 - “Rejected”
When there are multiple requests and user can fulfill only few then all other requests which are not fulfilled will be rejected.
 - “Processed by some other Producer”
This status means that the pending request was fulfilled by some other producer.
 - “Connection Reset”
When there exist a switch between Holon Object and its supplier and the switch is turned “off” (closed / red in color) then the status changes to connection reset.

Exception:

- If the switch is placed between the supplier (Holon Object/ Power Source) and Holon Object and the switch is turned off (i.e. No connection between the two), if we click on the Holon Object which requires energy the Message Status will be “**Connection Reset**” as the supplier is no longer available.
 - However, if the switch is opened again (i.e. Turned On, Green in color) before clicking the Holon Object, and Holon Object is clicked after the toggle, the status will be “**Accepted**” instead of “**Connection Reset**” between the two as the Holon Object was not clicked during the time the switch was turned off and was clicked only after the switch was turned on again.
 - Thus, to make the Holon Object aware of the switch after the switch is turned off, we must click on the Holon Object to view its Info Window.
- Connected field specifies whether the Holon Object is still connected to its supplier or not. True means there exist powerline (if with switches all in “On” status) and false means no connection.
 - Communication Mode field specifies mode through which the Holon Object got the required Power. There exist two Communication Mode:
 - Via Holon Coordinator
 - When the Holon Coordinator provide power to the Holon Object.
 - This is done by Distribute Energy option present. *Click on Holon Object (Coordinator Only) → Info Window opens → Click on Distribute Energy.*

- Direct via Peer
 - Another Holon Object (having Holon Element of type Producer such as Solar cell and state of the Holon element is “On”) provides the required power to the Holon Object.
 - This is done by clicking the Take Action button of the popup which opens after Inbox is clicked. *Click on Holon Object → Info Window opens → Click on Inbox.*

Inbox of Holon Object



Click on Holon Object → Info Window opens → Click on Inbox

Messages Received							
Request#ID	Consumer ID	Requestor Type (Priority)	Power Requested	Power Granted	Message Status	Connected	Communication Mode
5	8	House (2)	300	300	ACCEPTED	true	DIRECT via PEER
3	8	House (2)	300	300	CONNECTION RESET	true	DIRECT via PEER
1	4	House (2)	300	0	PROCESSED BY SOME OTHER PRODUCER	true	DIRECT via PEER
<div>Take action</div> <div>Close</div>							

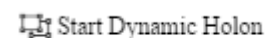
- This option display the messages from all Holon Object which requires Power.
- A Holon Object will only receive a message in its Inbox if it has the flexibility greater than 0 (Zero).
- The Holon Object can take the necessary action on the incoming messages by clicking the Take Action Button present in the Popup which opens when the Inbox button is clicked.
- When there exist multiple requests from multiple Holon Objects asking for power from the Holon Object (Producer), the Take Action button provides energy based on the Priority of the Holon Object giving highest priority to the Hospital, Police Station then House and last Restaurant.
- The popup contains
 - Request Id (an auto increment number) specifying the id of the request.
 - Consumer Id field specify the id of the Holon Object which needed energy.
 - Requestor type field specify the type of Holon Object from which the request came. This option shows the priority of the Holon Object in the closed Bracket.
E.g. House (2) means request came from House type Holon Object with priority 2.
 - Power Requested field specify the amount of power requested by the Holon Object.
 - Power Granted field specify the amount of power granted by the supplier.
 - Message Status are:
 - “Accepted”
 - This status means that the requirement of the Holon Object for power is fulfilled by the supplier.

- “Pending”
 - This status means that the requirement is yet not fulfilled.
- “Rejected”
 - When there are multiple requests and user can fulfill only few then all other requests which are not fulfilled will be rejected.
- “Processed by some other Producer”
 - This status means that the pending request was fulfilled by some other producer.
- “Connection Reset”
 - When there exist a switch between Holon Object and its supplier and the switch is turned “off” (closed / red in color) then the status changes to connection reset.
- Connected field specifies whether the Holon Object is still connected to its supplier or not. True means there exist powerline (if with switches all in “On” status) and false means no connection.
- Communication Mode field specifies mode through which the Holon Object got the required Power. There exist two Communication Mode:
 - Via Holon Coordinator
 - When the Holon Coordinator provide power to the Holon Object.
 - This is done by Distribute Energy option present. *Click on Holon Object (Coordinator Only) → Info Window opens → Click on Distribute Energy.*
 - Direct via Peer
 - Another Holon Object (having Holon Element of type Producer such as Solar cell and state of the Holon element is “On”) provides the required power to the Holon Object.

Exception:

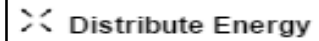
- If a Holon Object requires 200 unit of power but the Holon Object (Supplier) is able to grant only 100 unit of power then the Holon Object has to again send the message to its peers asking for 100 unit of power which was left unfulfilled. Thus, a new request id will be generated for this request.

Start Dynamic Holon



Click on Holon Object → Info Window opens → Click on Start Dynamic Holon

- This functionality lets the Holon Object to switch to a new Holon if it is not able to find the sufficient energy within its Holon for a given time interval.
- The Holon Objects requests all the suppliers after every 10 seconds asking for the energy.
- If the Holon Object doesn't receive a reply after 5 requests, it will shift to a new Holon if there exist one with sufficient energy connected to it.



Distribute Energy to Other Holon Objects

Click on Holon Object (Coordinator Only) → Info Window opens → Click on Distribute Energy

- The coordinator has the overall view of the Holon.
- If a Holon Object needs power and the Holon Coordinator has flexibility then the Holon Coordinator can give energy from connected Holon Objects and connected Power Sources.
- Distribution of power is based on the Priority of the Holon Object e.g. Hospital gets energy first else an alert is shown with a message Insufficient Flexibility.
- If the priority is same then then Holon Object is chosen randomly.
- The energy requirement of the Holon Object is fulfilled firstly by considering the connected Power Source and then connected Holon Objects which are the producers and have flexibility.
- Distribute energy is clicked , popup is shown

Distribution of energy by Holon Coordinator								
Consumer ID	Consumer Type (Priority)	Producer ID	Producer Type	Power Requested	Power Granted	Message Status	Connected	Communication Mode
8	House (2)	N/A	N/A	100	N/A	N/A	N/A	N/A

- Consumer Id field specify the id of the Holon Object which needed energy.
- Consumer Type specify the Type of Holon Object.
- Producer Id specify the id of the supplier.
- Power Requested is the requested power from the Holon Object.
- Power Granted is the power given by the supplier.
- Message status are
 - “Accepted”

This status means that the requirement of the Holon Object for power is fulfilled by the supplier.

- “Pending”

This status means that the requirement is yet not fulfilled.

- “Rejected”

When there are multiple requests and user can fulfill only few then all other requests which are not fulfilled will be rejected.

- “Processed by some other Producer”

This status means that the pending request was fulfilled by some other producer.

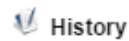
- “Connection Reset”

When there exist a switch between Holon Object and its supplier and the switch is turned “off” (closed / red in color) then the status changes to connection reset.

- Connected field specifies whether the Holon Object is still connected to its supplier or not. True means there exist powerline (if with switches all in “On” status) and false means no connection.
- Communication Mode field specifies mode through which the Holon Object got the required Power. There exist two Communication Mode:
 - Via Holon Coordinator

When the Holon Coordinator provide power to the Holon Object.
 - This is done by Distribute Energy option present
 - Direct via Peer

Another Holon Object (having Holon Element of type Producer such as Solar cell and state of the Holon element is “On”) provides the required power to the Holon Object.



History of Energy Received From Holon Objects

Click on Holon Object (Coordinator Only) → Info Window opens → Click on History

- This gives the History of all the energy supplied by the Holon Coordinator to the Holon Object.
- This option when clicked shows a popup.

History of Distribution of energy by Holon Coordinator								
Consumer ID	Consumer Type (Priority)	Producer ID	Producer Type	Power Requested	Power Granted	Message Status	Connected	Communication Mode
4	House (2)	5	Holon Object	300	300	ACCEPTED	true	via HOLON COORDINATOR

- Consumer Id field specify the id of the Holon Object which needed energy.
- Consumer Type specify the Type of Holon Object.
- Producer Id specify the id of the supplier.
- Power Requested is the requested power from the Holon Object.
- Power Granted is the power given by the supplier.
- Message status are
 - “Accepted”

This status means that the requirement of the Holon Object for power is fulfilled by the supplier.

- “Pending”

This status means that the requirement is yet not fulfilled.
- “Rejected”

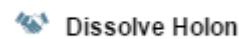
When there are multiple requests and user can fulfill only few then all other requests which are not fulfilled will be rejected.
- “Processed by some other Producer”

This status means that the pending request was fulfilled by some other producer.

- “Connection Reset”

When there exist a switch between Holon Object and its supplier and the switch is turned “off” (closed / red in color) then the status changes to connection reset.

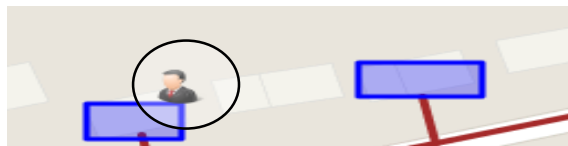
- Connected field specifies whether the Holon Object is still connected to its supplier or not. True means there exist powerline (if with switches all in “On” status) and false means no connection.
- Communication Mode field specifies mode through which the Holon Object got the required Power. Here, since the option is only for the coordinator it is always Via Holon Coordinator.



Dissolve Holon

Click on Holon Object (Coordinator Only) → Info Window opens → Dissolve Holon

- This option works only when flexibility of Holon is zero and current energy requirement is greater than zero.
- When two different Holon’s are present and one of them doesn’t have sufficient energy and the other does, then the Holon’s are merged together into a single Holon.
- The new coordinator is the one with the highest value with result of multiplication of competency value and trust value becomes the new Holon Coordinator.
- If there is only one Holon present with insufficient flexibility, Dissolve Holon will not work.



Coordinator Election

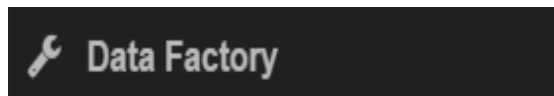
- When a new Holon Object is created, it is black in color. The black color signifies that current Holon Object is not a part of any Holon.
- The Holon Object is connected to the Main Line using connect to Main Line option in the Menu inside the Holon Object. It then becomes a part of any random Holon.
- If it is a first Holon Object connected to the Main power line, then it becomes the coordinator else an election takes place between the already created Holon Coordinator and the newly created Holon Object.
- The Holon Object with the highest value with result of multiplication of competency value and trust value becomes the new Holon Coordinator.

- The Trust Value and the Competency Value are assigned randomly during the creation of Holon Objects.
- Also, when a switch is placed between the Holon Object and turned off then again the coordinator election takes place between the Holon Objects.
- The Holon Object which becomes the coordinator has an icon on above of it as shown in the diagram above.
- Coordinator election only takes place between the Holon Objects belonging to the same Holon **EXCEPTION** when Holon dissolves.

Generate Holon Object from Factory



→ Data Factory



- This option generate the Holon Objects from the factory.
- Click on Data Factory icon, to enable this functionality.
- In a separate tab, a new page will be opened.

Data Factory (Enter weight for the following Holon Object Types in percentage)		(Each Holon Object will have a maximum of 10 randomly selected Holon Elements)	
House (Priority = 3):	<input type="text"/>	Holon Element Types	
Police Station (Priority = 2):	<input type="text"/>	1 - AC : (Max. Capacity:300, Min. Capacity:120) : [Consumer]	
Hospital (Priority = 1):	<input type="text"/>	2 - Battery : (Max. Capacity:700, Min. Capacity:50) : [Producer]	
Restaurant (Priority = 4):	<input type="text"/>	3 - Dryer : (Max. Capacity:250, Min. Capacity:140) : [Consumer]	
<input type="button" value="Send to data generator"/>		4 - Solar Cell : (Max. Capacity:800, Min. Capacity:0) : [Producer]	
		5 - TV : (Max. Capacity:150, Min. Capacity:45) : [Consumer]	
		6 - Washing Machine : (Max. Capacity:200, Min. Capacity:60) : [Consumer]	

- Each Holon Object is created based on the weight (probability e.g. 40 or 50) given in the textbox (weight is given in percentage).
- Holon Objects with highest priority is created first and so on.
- Each Holon Object contains 10 Holon elements which can be either consumers or producers.
- Clicking on Send to data generator creates 56 Holon Objects on the map.






Holon Elements

Add Holon Element




Click on Holon Object → Info Window opens → Holon Elements → Add Holon Elements

- This option adds a new Holon element on the Holon object.
- When the user click on this, a pop up gets opened.

- Select Holon element Type (e.g. A.C. (consumer) or Solar Cell (producer) etc.).
- If a Holon Element contains a producer and the producer is on, an icon  appears on the top of the Holon. If the status of the Holon element is off, the icon changes to . Also, if a producer is added, thus it is able to provide power then the Holon Object is producing rather than consuming. Thus, the additional energy becomes its flexibility. **Flexibility: 300** In the info window means the Holon Object is capable of giving 300 units of power.
- If a Holon Element is a consumer, he needs energy then an Icon  appears in the info window of the Holon Object showing its current energy requirement as required by Holon Object (Current energy is the sum of all power of Holon Elements which are consumer's) **Current Energy Required: 500** 
- If the Holon Object wants energy, it can click on the message icon  in the info window and thus message will be send to all the producers within that Holon that have flexibility.
- Select Holon Element State (On/Off). Holon element state allows the Holon Element to communicate or not.
- Enter the current usage or production.
- If Save Element button is clicked, then the Holon element is saved in the corresponding Holon object.

Note:

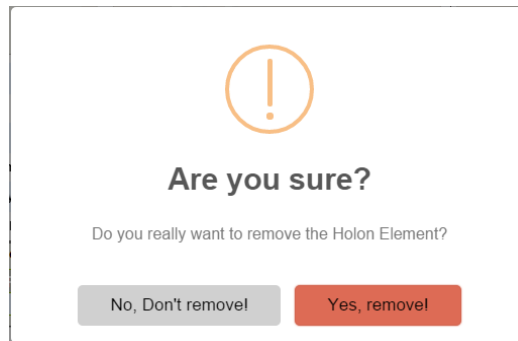
- In a Holon Object, if No. of producers > No. of consumers => Holon can give power thus have **flexibility**.
- In a Holon Object, if No. of producers < No. of consumers => Holon requires energy thus, it can send message to other Holon's asking for the energy by clicking the message icon .

Delete Holon Element

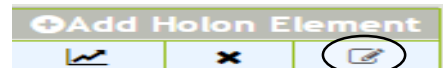
Click on Holon Object → Info Window opens → Holon Elements → Add Holon Elements → Click on Icon



- This option delete the created Holon element.
- When we click on this icon, an alert pops up.



- Click yes, remove! To remove the Holon element.

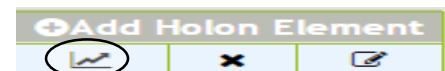


Edit Holon Element

Click on Holon Object → Info Window opens → Holon Elements → Add Holon Elements → Click on Icon

- This option edit the created Holon element.
- When we click on this icon, a form opens.

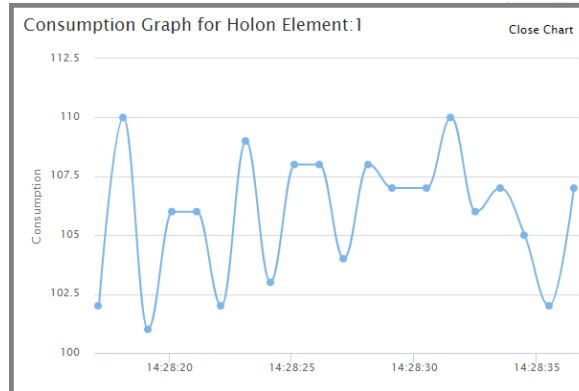
- Edit the details and click Save Element to save the edited Holon element.



Show Consumption of Holon Elements

Click on Holon Object → Info Window opens → Holon Elements → Add Holon Elements → Click on Icon

- This option show the consumption of Holon element.
- When we click on this icon, a graph opens.
- Edit the details and click Save Element to save the edited Holon element.
- This graph shows the consumption of Holon element present inside the Holon Object.



- Since, the value is fixed for the consumption. We have added a random number to show fluctuations.
- Close Chart present on the side, closes the consumption graph.

Power Source

Add Power Source



→ Power Source → Add Power Source

+ Add Power Source

- This option adds Power source on the map.
- Click on this option to enable the functionality.
- Click on the area on the map, where you want to draw the power source.
- Again click on the map, to end drawing the power source circle.
- A popup will appear.

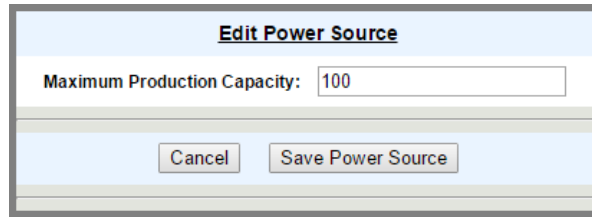
- Add Maximum Power capacity to the opened form.
- Save Power Source by clicking Save Power Source button.
- Initially, Power source is turned off.
- Click Cancel to cancel the addition.

Edit Power Source

Click on Power Source → Info Window opens → Edit Power Source

Edit Power Source

- This option edit the Power Source.
- A form opens, when user click on Power Source.



Edit Power Source

Maximum Production Capacity:

- Edit the maximum production capacity.
- Click Save Power Source button to save the power source production capacity.
- Click cancel button to cancel the edit.

Connect Power Source to Power Line

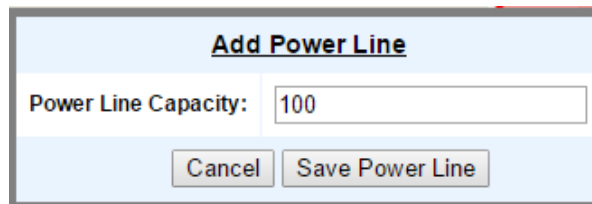


→ Power Source → Connect To Main Line.



Connect To Main Line

- Clicking on this option enables the functionality to connect a Power Source to mainline* (already present) through a subline* on the map.
- Enable this option by clicking on it.
- Click a Power Source
- Click a Mainline (already present).
- A popup will open.



Add Power Line

Power Line Capacity:

- Save the subline by entering its capacity e.g. 100 or cancel it.
- If Save button is clicked, a subline will be drawn connecting Mainline to Power Source.
- Once a Power Line is successfully created, it turns brown.

Turn Power On/Off

Click on Power Source → Info Window opens → Turn Power Off



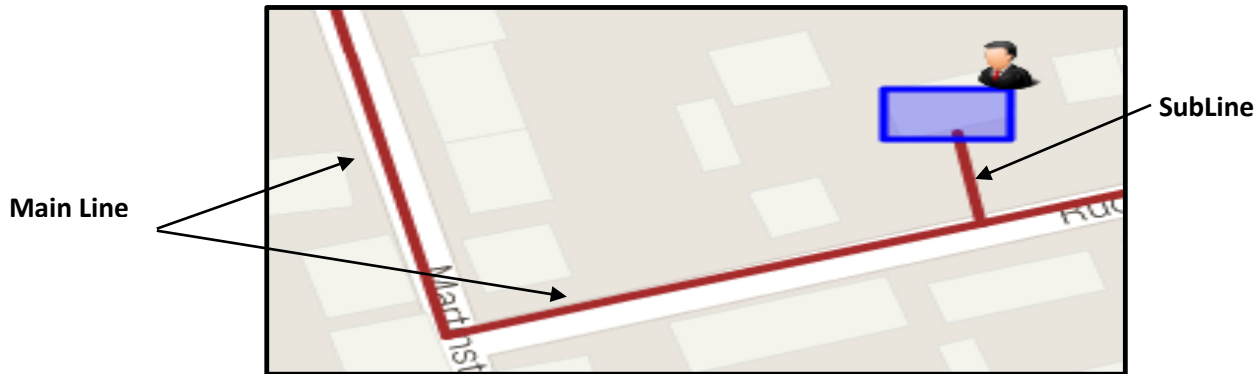
Turn Power On

- This option turns the Power source On/Off.
- When the Power Source is on, the color of the Power Source is green. When it is turned off, the color turns red.
- When the Power Source is off, it does not produce energy.

Power Line

In our project, we have 2 types of Power lines:

- Main Line: It is drawn independent of any objects on the map. These are the lines, which are drawn on the street. Draw powerlines from one end of the street to another.
- Subline: It connects a Main line to a Holon Object or Power Source.



Draw Power Line

→ Power Line → Draw PowerLine

→ Draw PowerLine

- This option is used for drawing a Power Line (Main Line only).
- When we click on this option, it gets enabled.
- Click anywhere on the street.
- Draw a power line. Again, double click on the point where you want to end it.
- A popup opens.

Add Power Line

Power Line Capacity:

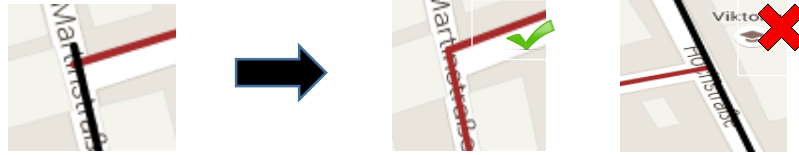
- Enter the current capacity of the line e.g. 100.
- Click Save Power Line button to save the Power Line.
- Once a Power Line is successfully created, it turns brown.

Connect two Power Lines

The user can connect two power lines by drawing the second power line near it. In this way, snap in functionality will work correctly.

Note:

- Snap in functionality works only when the power line that is being drawn has its end points close to the edges of other **Main line**. If any point in between is used to snap in the two lines, the functionality does not work.



Switch

Add Switch on Power Line



→ Switch → Switch on Power Line



Switch on Power Line

- This option is used for placing a switch on a Power Line.
- To add a switch, enable the functionality by clicking on it.
- Click on the Power Line where you want to place the switch.
- A switch is added on the Power Line.
- Disable the functionality by clicking on it.
- Initially, switch is on (green in color) i.e. energy can pass through it.
- To get the info about the switch first disable the functionality and then click on it to view its information.
- It can be turned off by clicking on it.

Turn Switch On/Off

Click on Power Switch → Info Window opens → Turn Switch Off



Turn Switch Off

- This option turns the switch on/off.
- When switch is “on”. The energy can flow through the line.
- When the switch is turned “off”. The energy cannot flow through the line.

Disaster mode

Create Disaster Mode

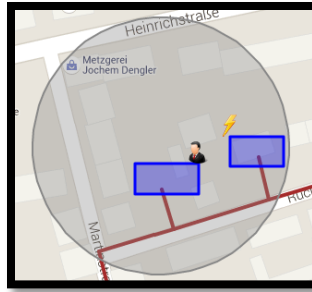


→ Disaster Mode → Create Disaster Mode



Create Disaster Mode

- This option creates a disaster over the Map.
- The disaster mode disable the communication within the area and also cut off the communication of rest of the Holon objects and Power Sources to the one's which are lying within.
- To create the disaster, click on Create Disaster Mode.
- Click on the area where you want to draw the disaster circle.
- Draw a circle where user wants to create a disaster, click again to end the circle.



Remove Selected Disaster

☰ → Disaster Mode → Remove Selected Disaster

⊘ Remove Selected Disaster

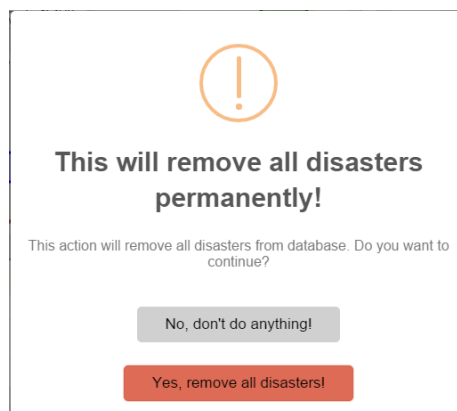
- This option removes a particular disaster from the Map.
- To enable this functionality, use click on the Remove Selected Disaster option.
- User click on the disaster circle which he wants to remove.
- The selected disaster is removed from the map.

Remove All Disasters

☰ → Disaster Mode → Remove All Disasters

⊘ Remove All Disasters

- This option removes all disasters from the Map.
- To enable this functionality, use click on the Remove All Disasters option.
- A pop up gets open.



- To remove all disaster user click on Yes! Remove all disasters.

Reset Database

☰ → Reset Database

↺ Reset Database

- This option clears the database.

- All the Holon Objects, Switches, Power Sources, Power Lines, Disasters are permanently removed from the database.