Visual Automation System (VAS)

What is VAS?
VAS is freeware of visual automation system developed by ThaiNetBeans.com (Mr.Prakan Puvibunsuk). This software can be used to check status of equipment in the system, in the future there will be more features such as analog data, sending command to turn on/off to equipment.

Requirements
The system consists of 3 parts as following
1. Computer Server
   Any PC that has JAVA 7 should be OK.
2. Serial(USB) to RS485 converter
   usb-rs485 cable (that use time event to change send/receive mode) will be unable to use in this system, try create your own converter that set pin enable to send and receive data. I recommend to use RS485 on Arduino MEGA because it has 4 hardware serials. If you can not make it, you may buy it from me ($50 USD each + shipping) by pay me via Paypal at prakan@gmail.com . Please note that I am not Great Seller but try buying my equipment to show support on me and be guaranteed that I will continue this project for good.
3. Controller
   Any micro-controller board which has RS485 is OK, I have made my own DIY Arduino-RS485 board. Again you can but it from me at price $15 USD each (no box).

Operation
- first install JRE 7 into computer server, if you do not know what is JRE try searching on google.
- For Linux and Mac user, you will have to install librxtx-java in additional. For example UBUNTU run ***sudo apt-get install librxtx-java***
- extract download file and double click **runme** file depend on your operating system
  Linux → runmeLinux.sh
  Windows → runmeWin.bat
- To use your own image widgets, replace images in the **images folder** but keep the same name (change name will make software error). You can have image type up to 9 images. The image that end with **-1.gif** is the image type that has **on** status.
- All images shall be gif only.
- you can edit test file by manual because it is just simple XML file.
- To add widget in the system, right click any where in center pane then select widget type as your choice but make sure you include image with the same name in images folder (the sample includes only 3 image types).
- To remove widget, right click any widget and select delete.
- To change background image, replace image file bg.gif with your new image but keep same name.

- Software will auto-load **test** file if it available in the folder, so do not delete it but edit to suite your project.
- Save to **test** file if you finish update every equipment in the system, in case you may have more systems, you can save to other name but it will not be auto-loaded then you will have to load it manually by click load button.
- To zoom, press **Ctrl** while scrolling your mouse.
- To move widget, just drag it to anywhere in the center pane.
- To change widget name, double click widget text and hit **Enter** after finish.

  Widget name will have to match following pattern.

  X-X-X-X

  First X is image type, if you change name, it will change image that match name in the next load.

  Second X is equipment name that use to communicate with microcontroller board.

  Third X is data type that use with this equipment, in first version only Digital Input (DI) is supported. Next version will support more such as DO, AI, AO

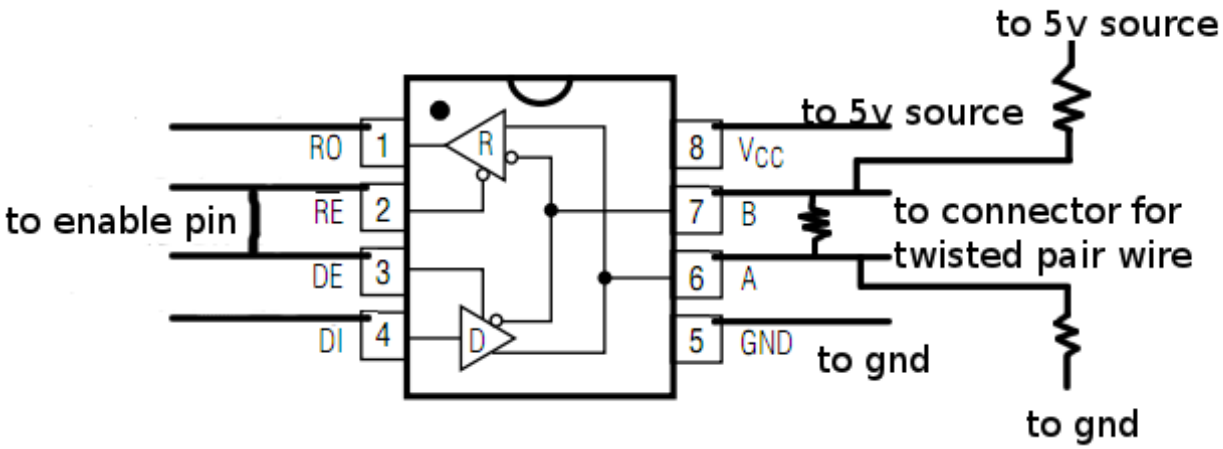
  Forth X is port(logical not physical) number in the equipment.
- You may find send/receive message at right bottom of the software.
- every send message will start with ***** as start byte and end with new line byte (\n).

  ***A-DI** (every message end with new line \n)

  request equipment A for DI data on all ports.
- every response message will start with **#** as start byte and end with new line byte (\n).

  #A-DI-101 (every message end with new line \n)

  response from equipment A for DI that has status ON on port 1, OFF on port 2 and ON on port 3 (you may have more ports, more port -> more message length)
- Before click **auto check** checkbox, please make sure correct serial port has been selected.
- Default BAUD rate is 19200.



RS485 Circuit