



POUYA

Power_system **O**nline_simulation **U**nveil **Y**our **A**nalysis

A Real Time Simulator



POUYA can be used to connect to the real world and controls the real power system through well-known Lab View¹ software, (needs NI license), where it will be connect to the actual instruments and provides Hardware In-the-LOOP.

On the other hand the same connection can provide Software In-the Loop (SIL) simulation that represents the integration of compiled production source code into a mathematical model simulation, providing engineers with a practical, virtual simulation environment for the development and testing of detailed control strategies for large and complex systems.

With SIL, engineers can use a PC to directly and iteratively test and modify their source code, by directly connecting software to a digital plant model substituting for costlier systems, prototypes or test benches. SIL makes it possible to test software prior to the initialization of the hardware prototyping phase, significantly accelerating the development cycle.

SIL enables the earliest detection of system-level defects or bugs, significantly reducing the costs of later stage troubleshooting, when the number and complexity of component interactions is greater. SIL provides an excellent complement to traditional Hardware In-the Loop (HIL) simulation, while helping to accelerate time-to-market and ensuring the more efficient software development.

Besides since POUYA can be run globally, the equipment has not needed to be replaced. This means that they can be observed and control far away from their location.

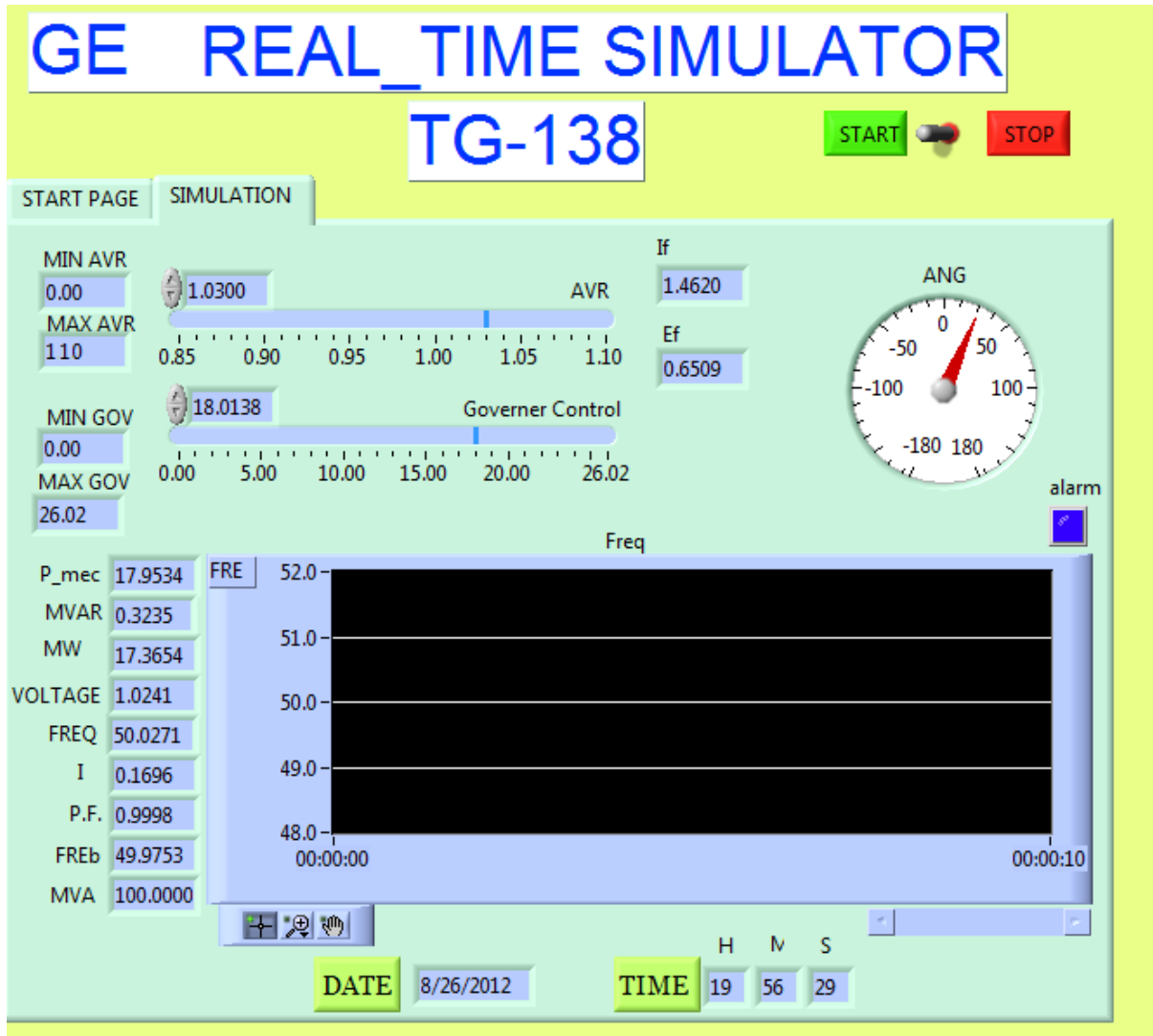
LABVIEW CONNECTION **LabVIEW**

The followings show various models of power system equipment that are constructed for this purpose.

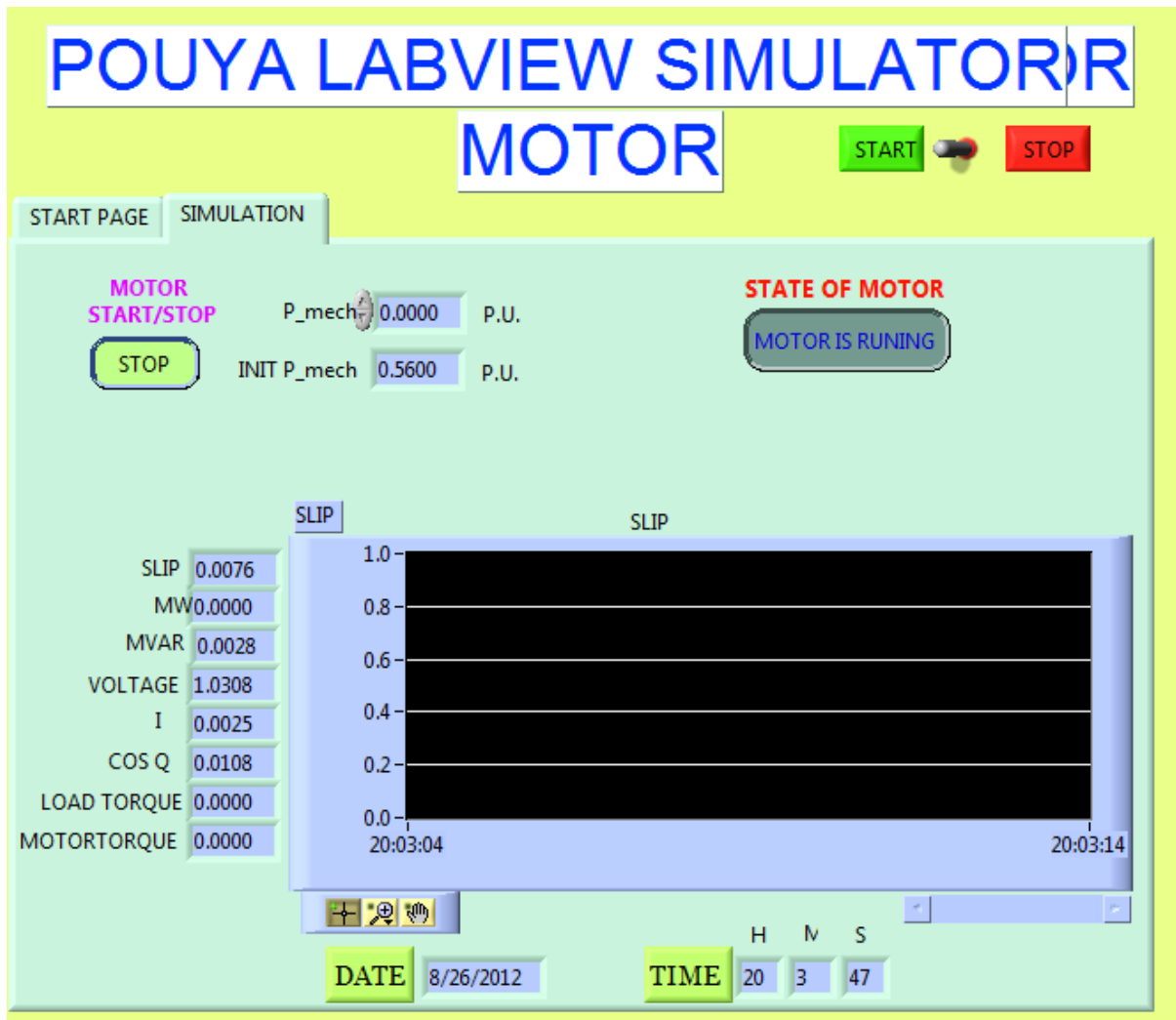
They are running in an example network:

¹ Lab view is a trademark of National Instrument (NI).

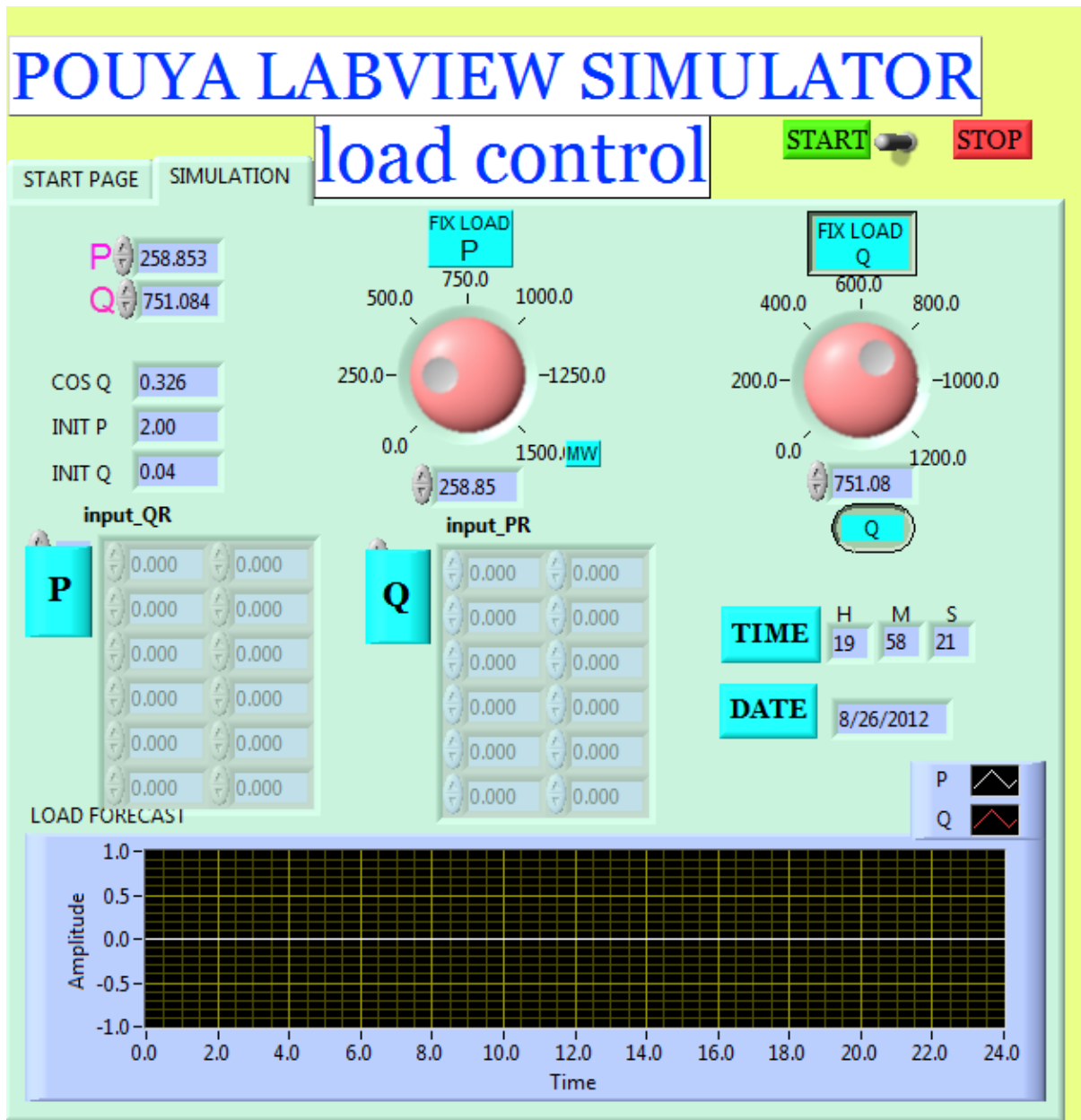
GENERATORS INTERFACE; see more in next page.



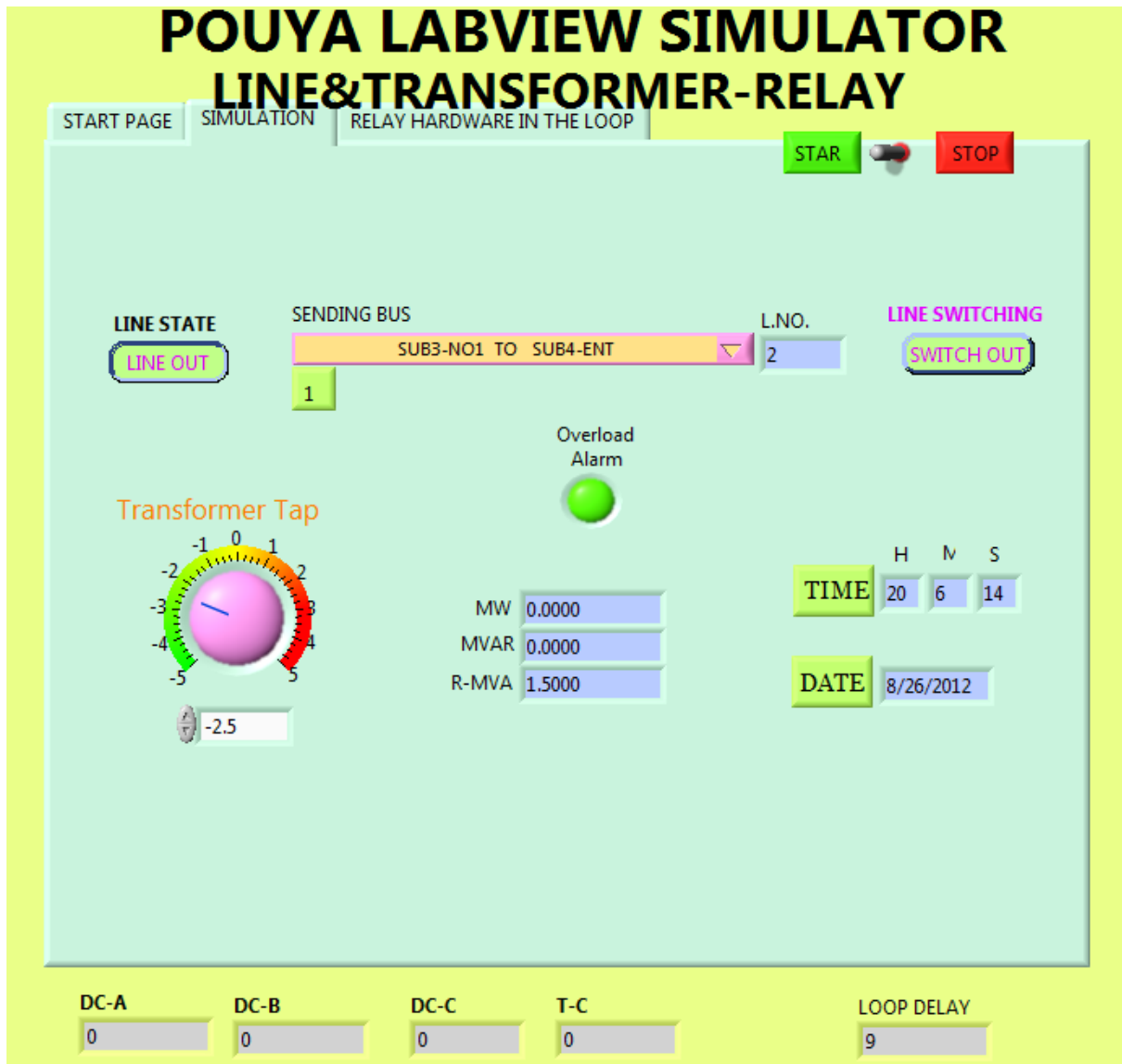
MOTOR INTERFACE; see more in next page.



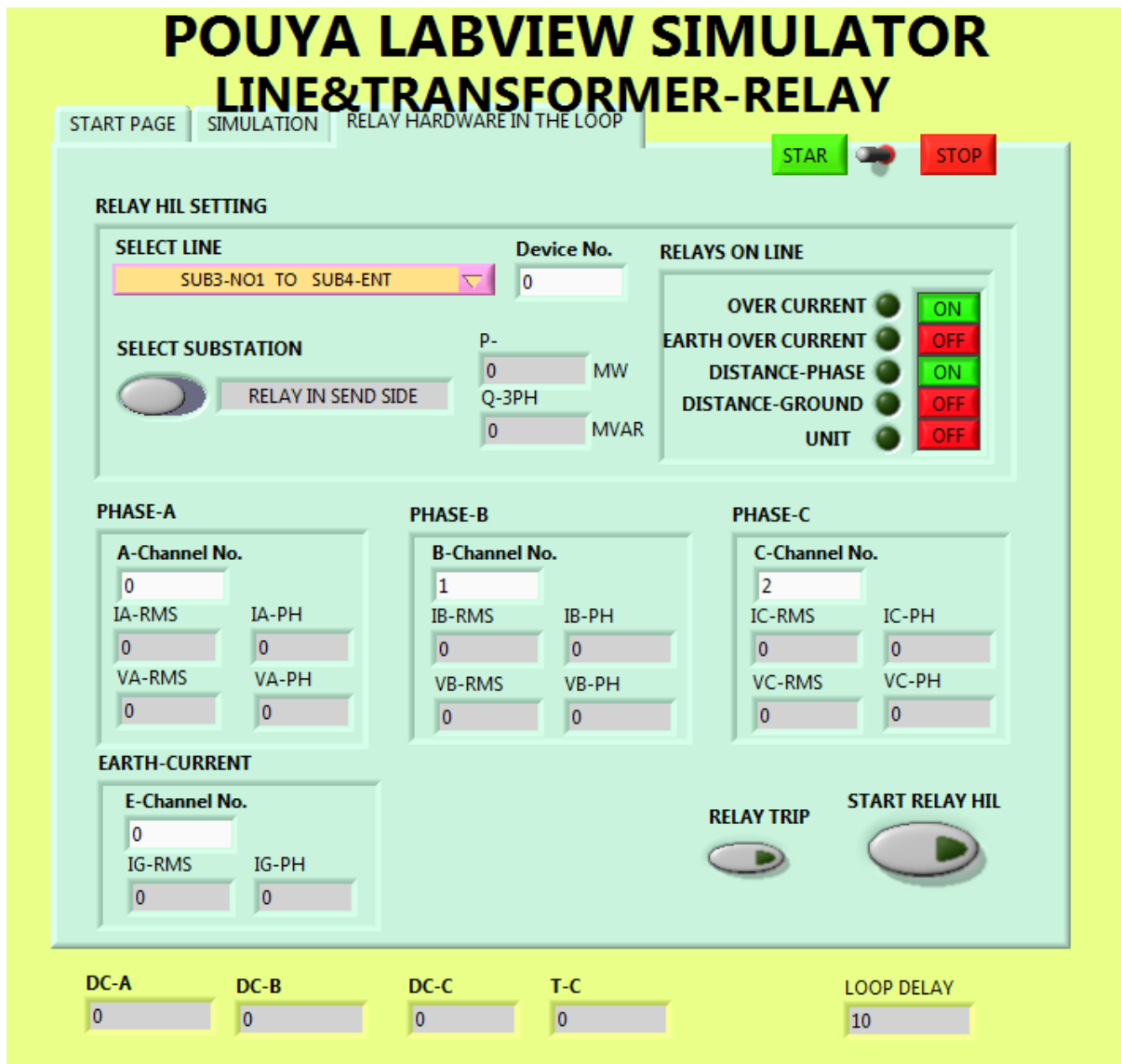
LOAD INTERACE; see more in next page.



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