DE LA RECHERCHE À L'INDUSTRIE

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WestBox: an object-oriented software component for WEST CODAC

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Since 2013 => start to **re-factoring CODAC source code**.

Goals :

- Modernize legacy implementations (C / Makefiles),

- Create a framework by main features:
    Data Acquisition,
    Timing Network,
    Finite States Machines,
    Shared Memory Network,
    etc.

- Make cross-plaform code (Cmake / Qt).

- Create a new component named **WestBox**:
    Object-oriented conception (C++),
    Integrate non native fast controller,
    Easily support external collaborations,
    Migrate to open technologies (Websocket, Mqtt).

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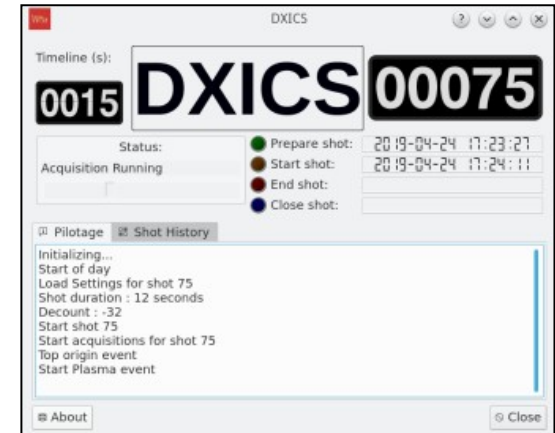13 – 17 MAY 2019, DAEJEON, REPUBLIC OF KOREA

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WestBox client:
- Fast controller.
- Use framework features on demand,

Goals:
- Read / Write settings from database,
- Acquire Plasma discharge data,
- Receive timing network events,
- Follow pulse sequence (finite-states machine),
- Shares data for plasma discharge control,
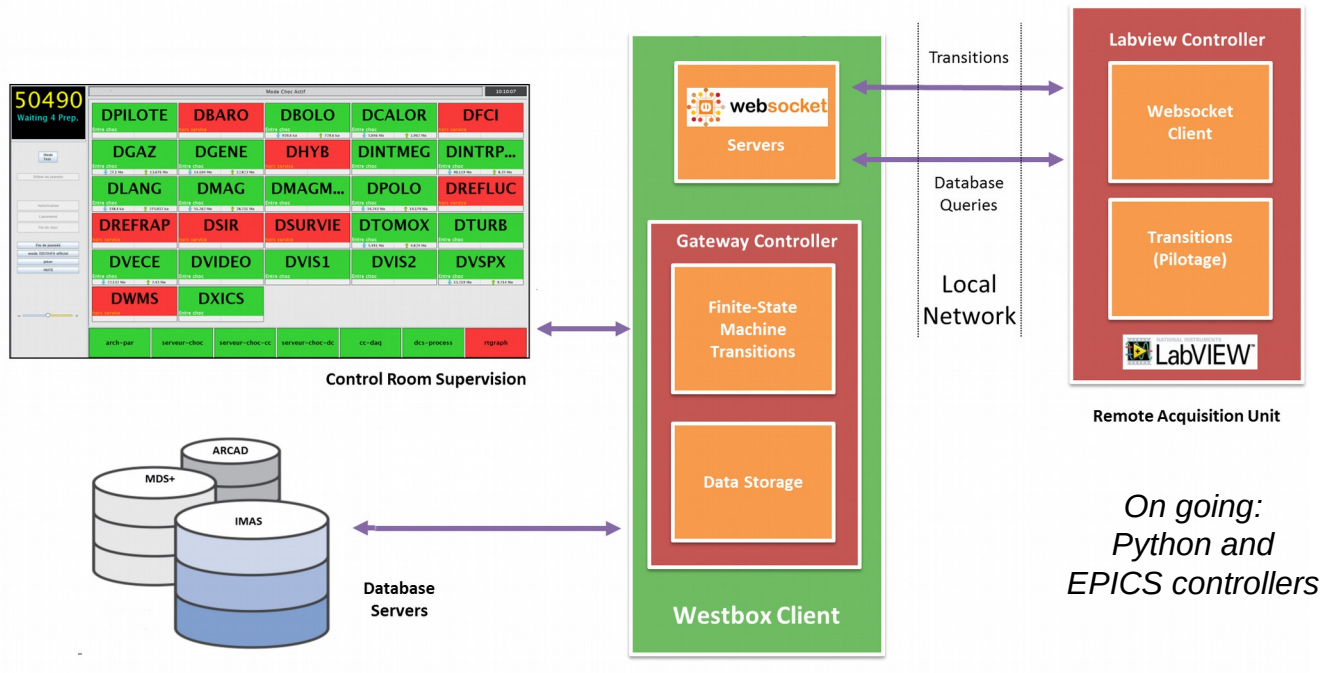- Write large files to database.

Extended:

- Provide local GUI (Qt),
- Integrate **Websocket** server:
    Stream acquisition,
    Stream states/events,
    Stream log-files,
- Provide remote Web interface.

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Non native device:

- Integrated as remote controller (ex Labview),
- WestBox become a Websocket gateway :
    Delegate finite-states,
    Delegate database access.
- Simple XML based protocol,
- Easy to hack with web browser.

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Thanks for your attention