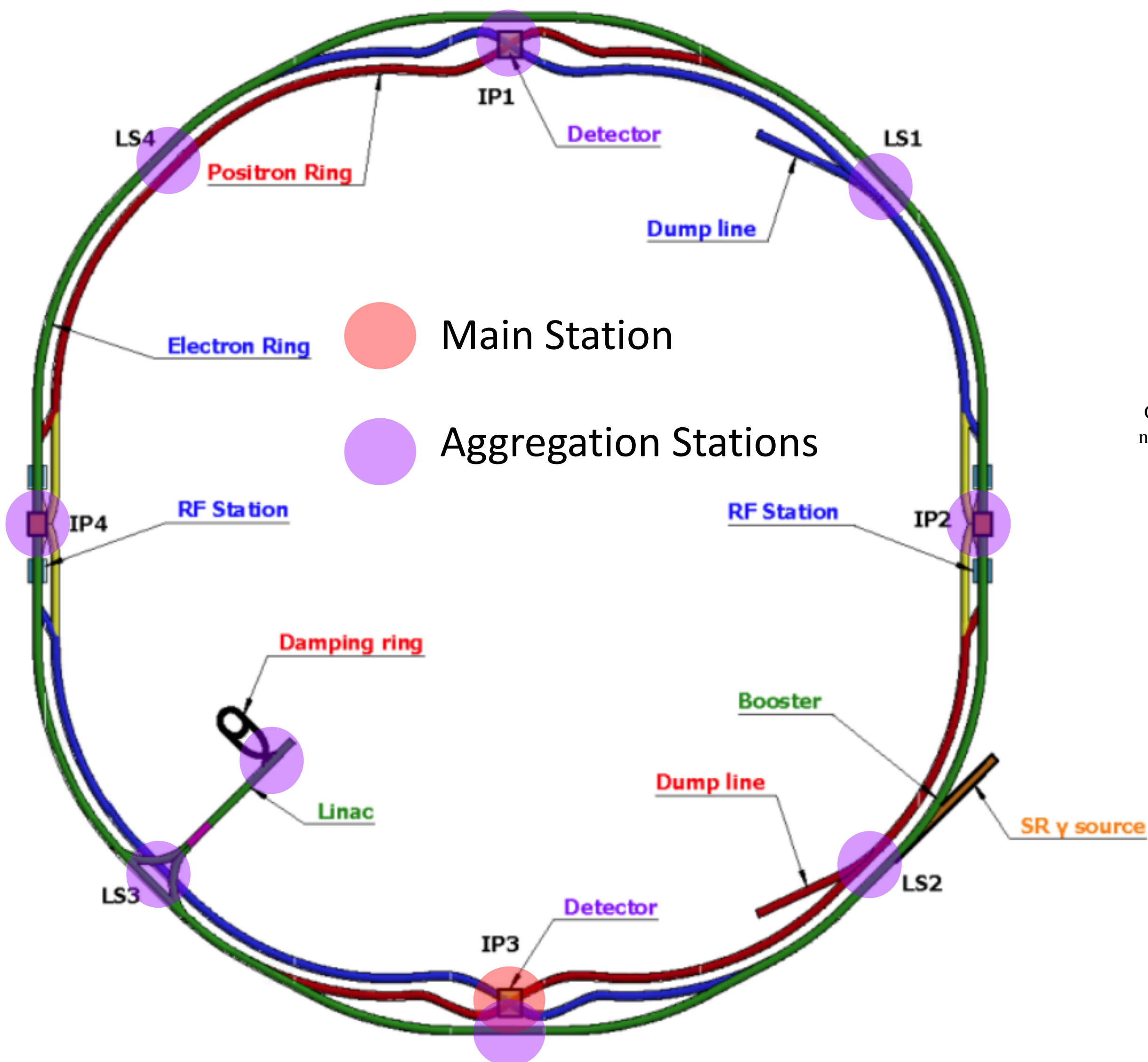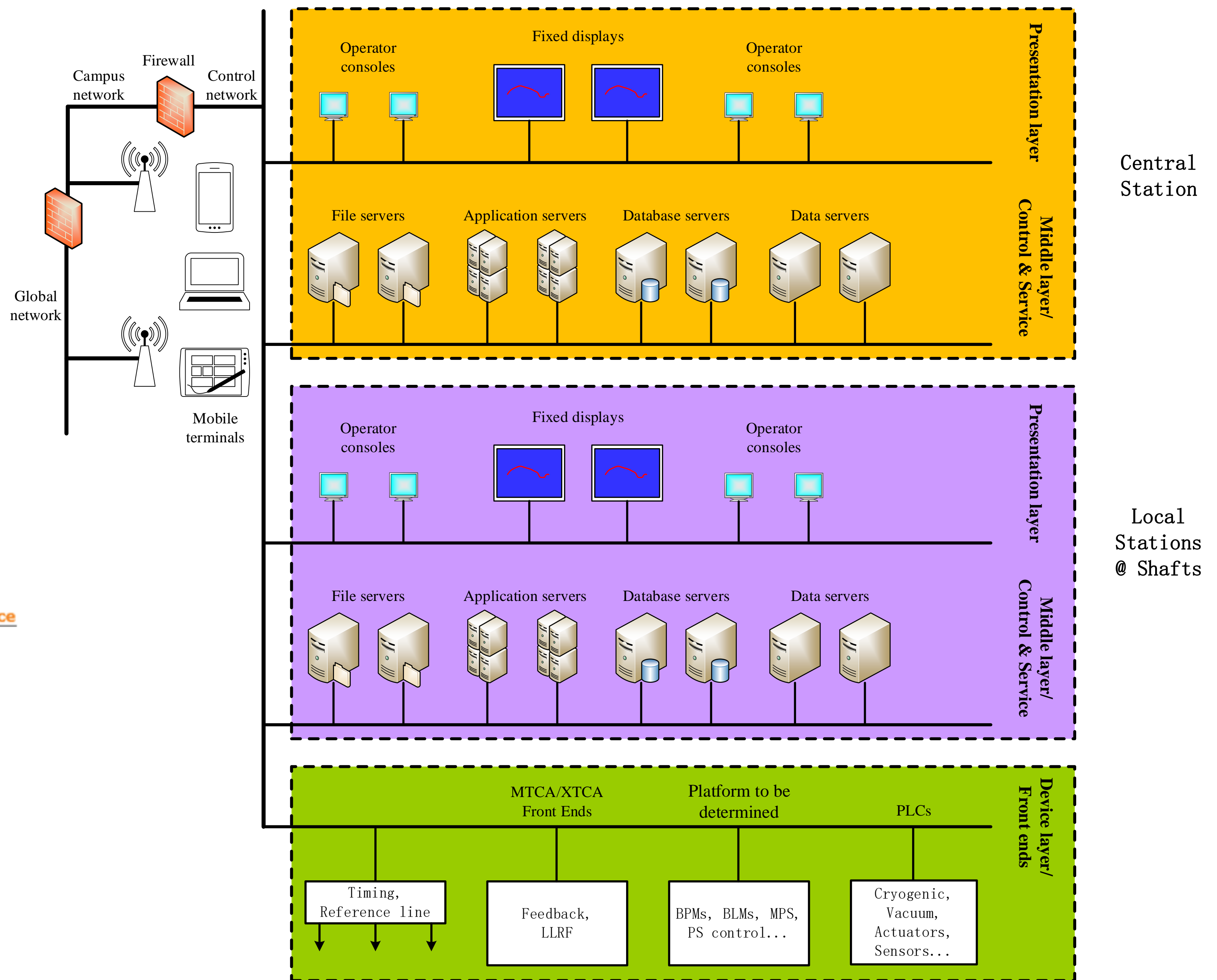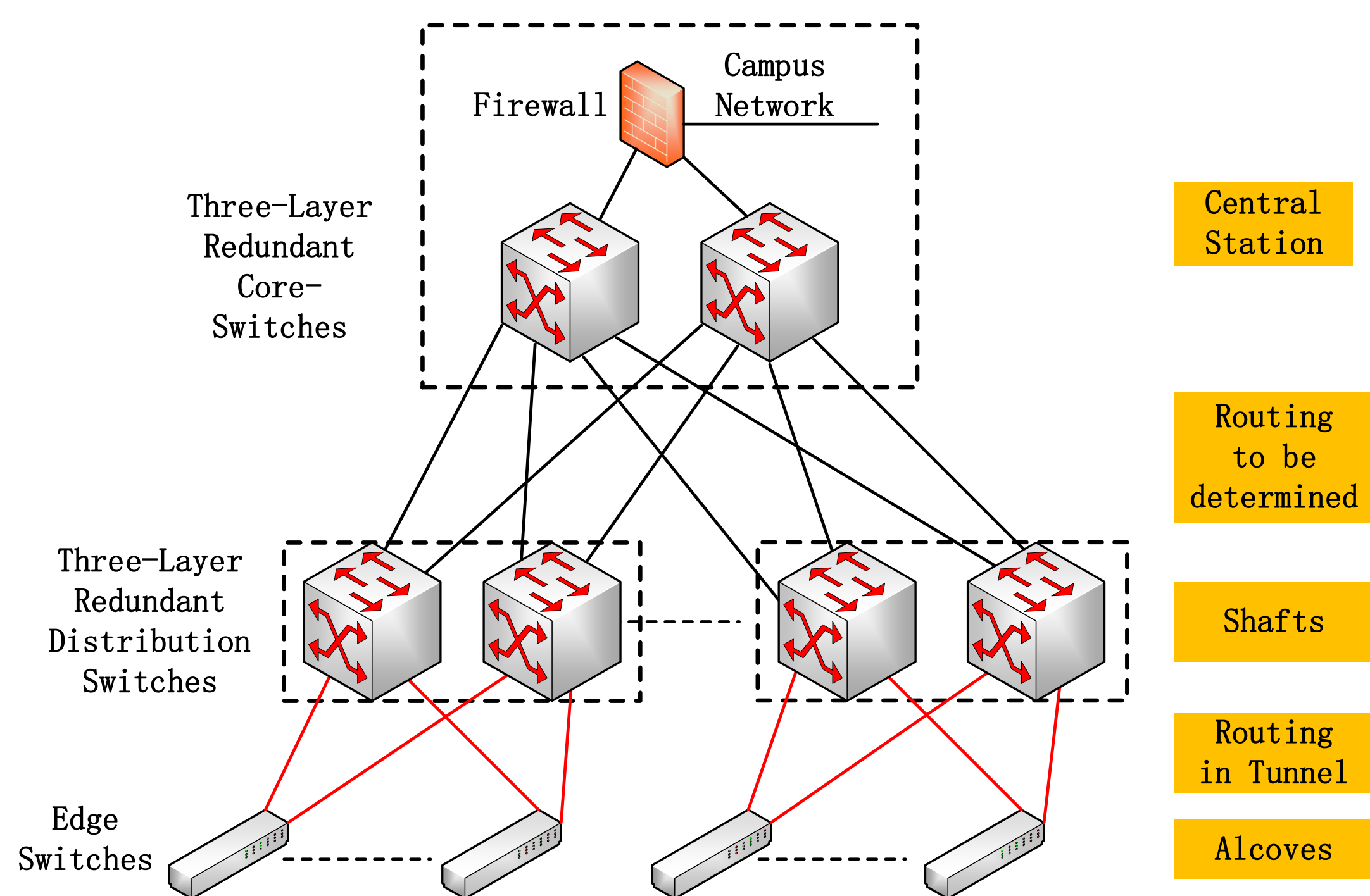# Design and development of CEPC control system
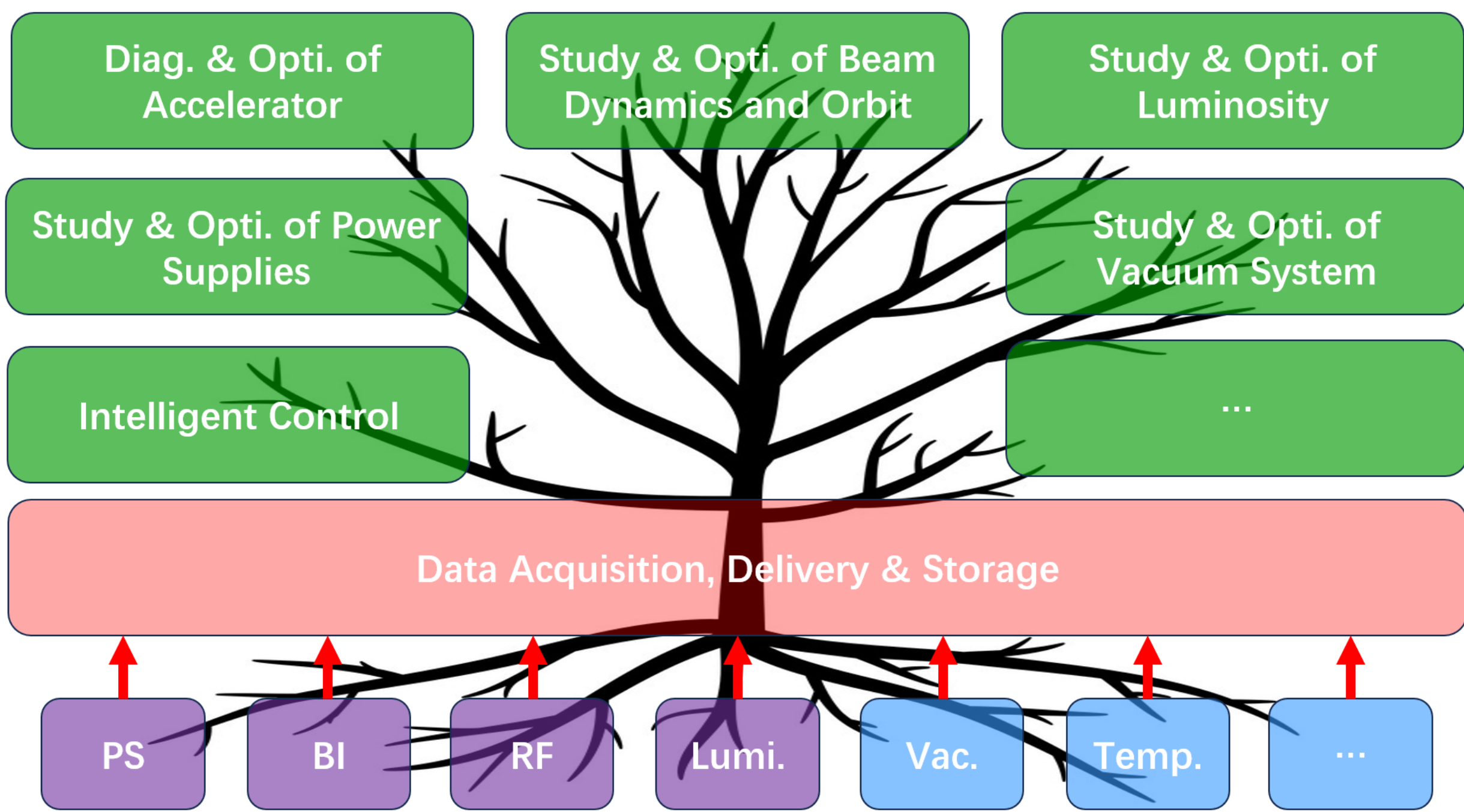

Timing/clock/network, optical-fiber-based connections
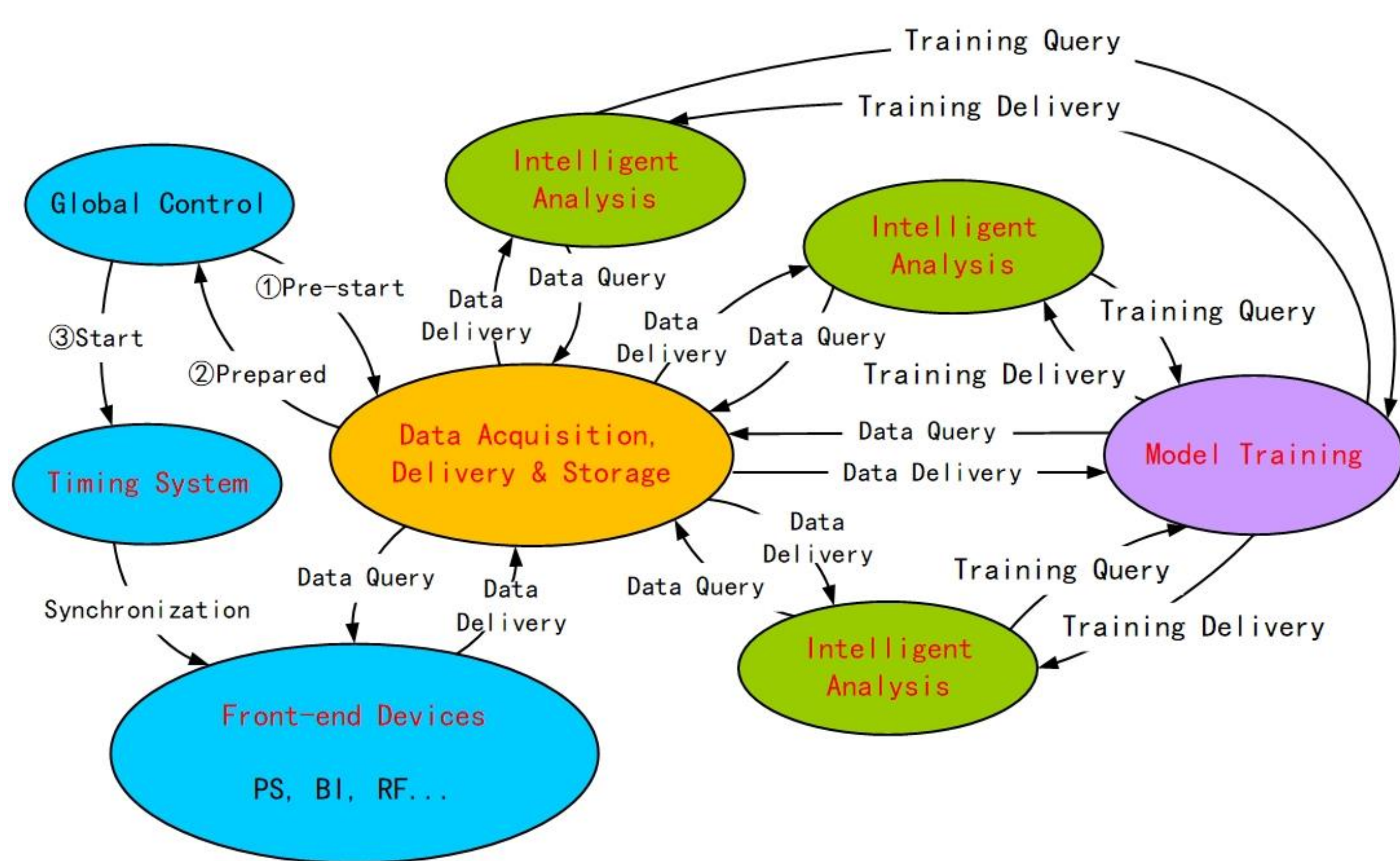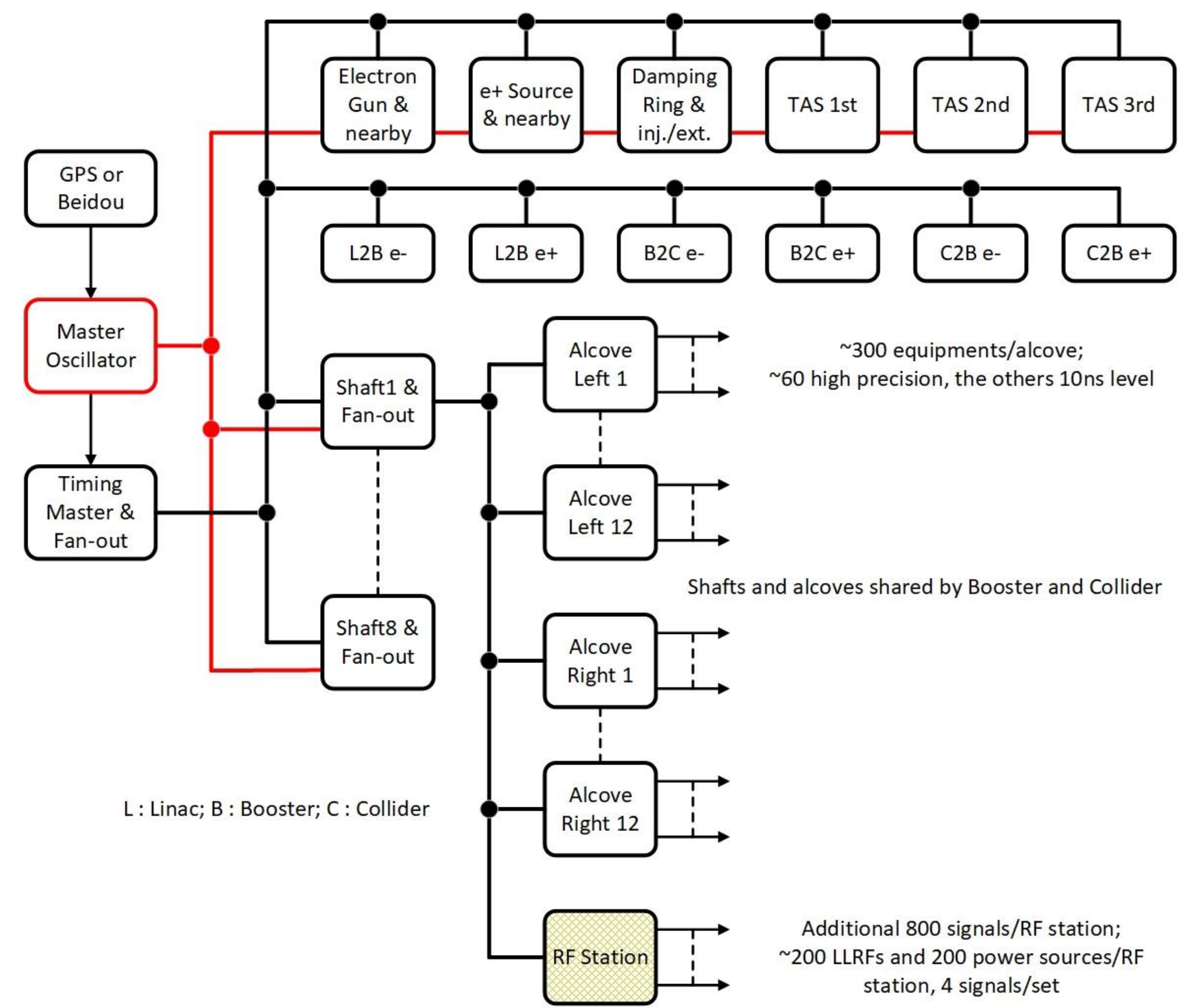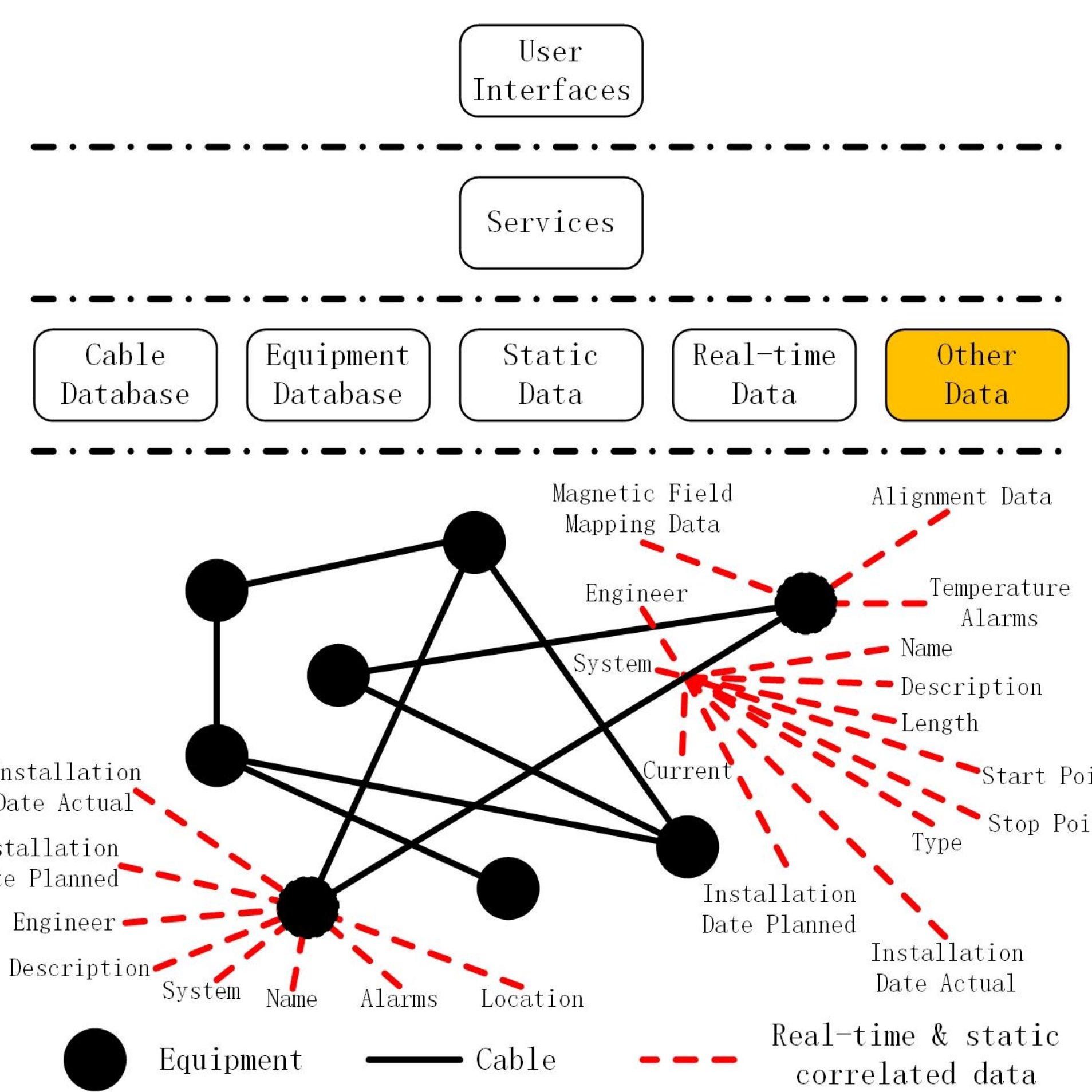

Network structure of the CEPC control system

Application of artificial intelligence based on high-quality data

Dataflow of data acquisition & analysis

Structure of CEPC control system

Structure of the timing system and clock reference

Information management system

With the huge size, there come some critical issues for CEPC related to the reliability, availability, maintainability and so on. Long distance means large temperature-variation induced time drift, which is essential for the clock reference and timing system. Large amount of equipment means large amount of data to be acquired and analyzed, and large amount of information to be managed.

High quality highly-correlated data is the base for machine performance improvement and fault prediction. High quality static & dynamic information management is the base for both of the facility construction and operation.

Besides those shown in this poster, there are many other control tasks, such as personnel protection, machine protection, global orbit feedback, power-supply remote control, vacuum control, environment monitoring, data archiving, system alarm …

Dapeng Jin, IHEP, Beijing, China. E-mail : jindp@ihep.ac.cn