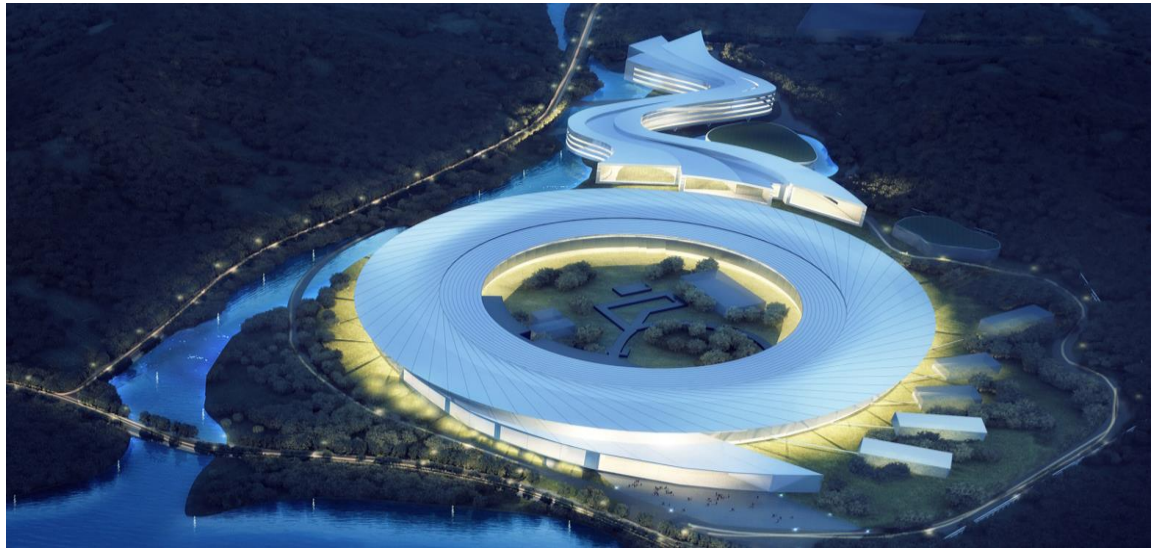
深圳综合粒子设施研究院
Institute of Advanced Science Facilities, Shenzhen

The SILF Accelerator Controls Plan

Z.Z. Zhou, G.M. Liu[1], L. Hu, T. Liu, J.H. Zhu, T. Yu, M.T. Kang †
Institute of Advanced Science Facility, Shenzhen, Guangdong Province, 518107, China
[1]also at Guangdong Provincial Key Laboratory of Magnetoelectric Physics and Devices and School of Physics, Sun Yat-Sen University, Guangzhou 510275, China †kangmingtao@mail.iasf.ac.cn



Speaker: Zhou Zize

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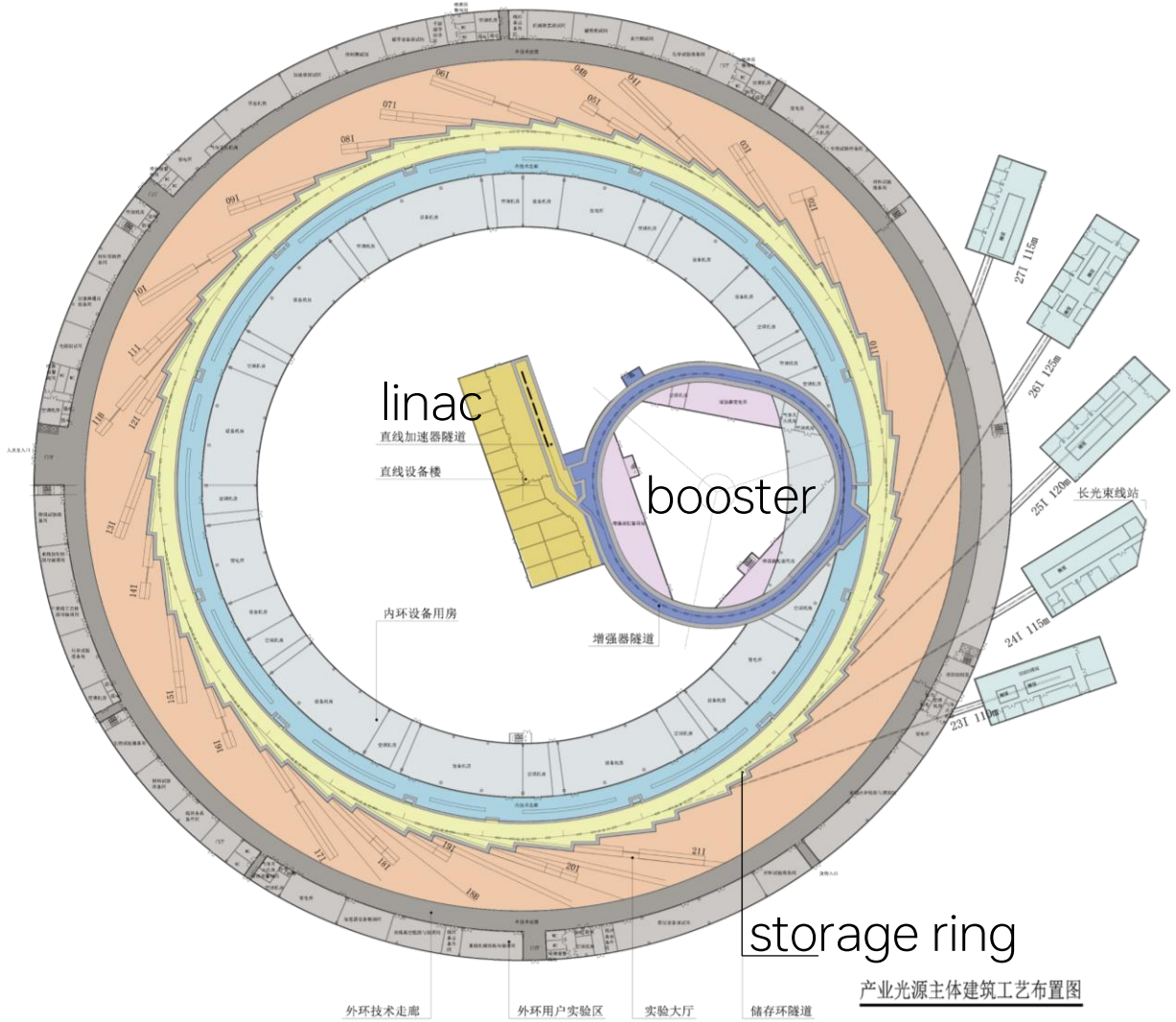
Shenzhen Innovation Light Source Facility (SILF) :
4th generation synchrotron radiation light source
50+ beamlines
Institute of Advanced Science Facility(IASF)
Located in Shenzhen, Guangdong, China

Brightness:
10^{22} s^{-1} mm^{-2} $m \cdot rad^{-2}$ (0.1% bandwidth)$^{-1}$

Accelerator:
linac 200 MeV
booster ramping from 0.2 GeV to 3.0 GeV
storage ring 3.0 GeV



Schematic layout of the SILF project

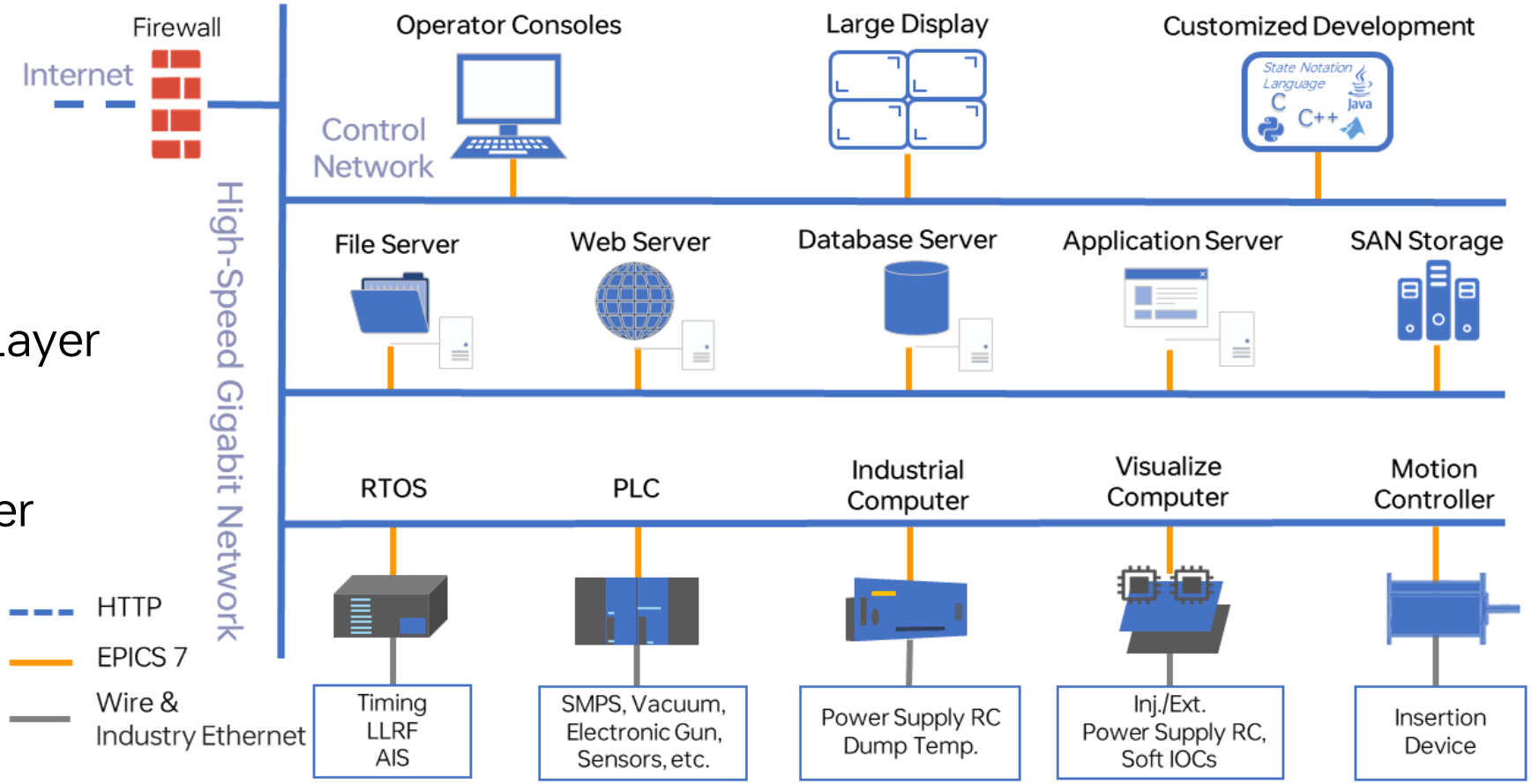
Software

EPICS

Presentation Layer

Middleware Service Layer

Frontend Device Layer



EPICS typical usage model of SILF

Hardware Platform

100 kHz -- 10 MHz

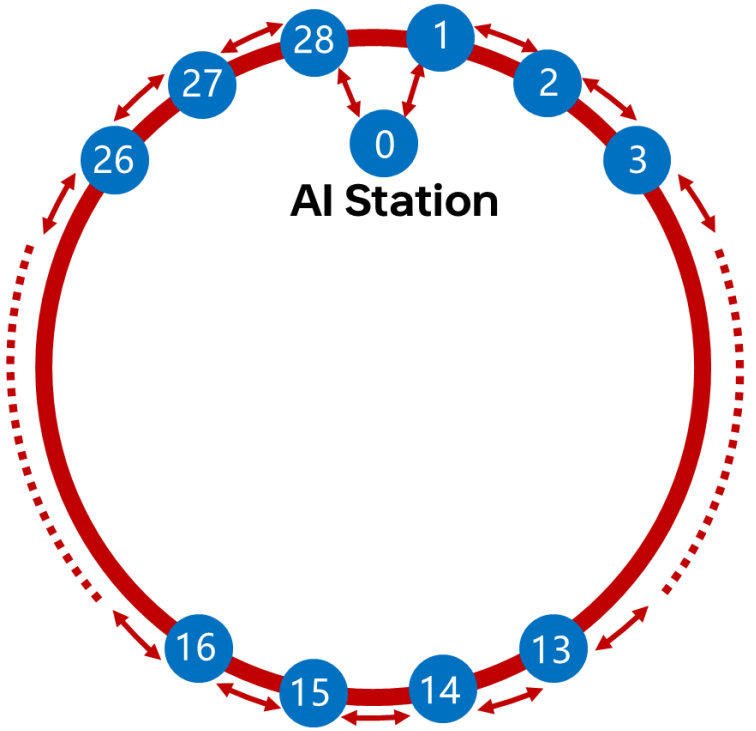
MicroTCA

10 Hz -- 100 kHz

EtherCAT

0.1 Hz -- 10 Hz

PLC



Layout of Active Interlock System architecture