Informatics Facility for Neuro Imaging
University of California, Los Angeles

UCLA's Institute for Informatic's new Data Center with super computer clusters had some very demanding requirements along with a vision to break away from tradition. The space was compact and their research demanded an equipment density of over 400 W/SF (15KW/Rack). The lineups with 32 racks and 18 in-row cooling modules are compact virtual hot and cold aisle containment units that capture the heat loads at the point source (rack level) without letting it escape and mix within the room. We often refer to these as "micro-container" solutions.

The LED lights on the top and inside of the racks are completely programmable down to the individual LED level and are connected to a sophisticated computerized control system. Custom algorithms are being developed for the lights within the racks which will allow the controller to acquire operational data such as energy, temperature, processing capacity, etc., and then have the lights respond accordingly. The individual LED light emitters will provide real time visceral indications of the working efficiency for each piece of equipment and its environment.

The design provides N+1 redundancy, flexibility, scalability, modularity and operational data acquisition. The Data Center's PUE is projected to be lower than 1.3.