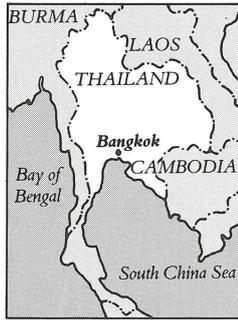


Thammasat University New Campus, Rangsit



Project Data

Client: Thammasat University
Architect: Sumet Jumsai Associates, Bangkok
Site: 405 hectares in Rangsit
Number of students (Phase I): 2500
Structure: Reinforced concrete
Total floor area (Phase I): 18,008 square metres
Completion (Phase I): 1986

Background

Thammasat University, founded in 1934, is one of the principal universities in Thailand. It is located in a cramped site near the Grand Palace and presently has about 10,000 students studying political and social science, the humanities, languages, etc. A new site of about 405 hectares 40 kilometres north of Bangkok was acquired 17 years ago to accommodate expansion programmes. The new campus is served by a major highway and railways, and is adjacent to an international university for science and technology, The Asian Institute of Technology (AIT). In the vicinity are several industrial complexes, Bangkok University (a privately run institution), a number of colleges and a new town.

In 1984, based on a previous master plan, work began on site preparation (flood protection bunds and some roads) and a building for Japanese study. In the same year a design competition was held for Phase 1 campus development. Sumet Jumsai Associates (SJA) was awarded work on the main campus together with a new master plan. Another design group was awarded the dormitory complex.

Master Plan

The plan covers a 4 hectare plot which is flat and inundated every year for 4 months. The architects accepted the polder bunds (already constructed) but realigned the canals and storage lakes after the Angkorian model. Water then becomes the matrix which "dictates" other grids — roads, walkways, bicycle paths, buildings, parks and quadrangles.

Although the plan is unified by every strong axes it is nevertheless an aggregate of numerous square building sites. The plan actually takes into account the constraints and uncertainty of government budgets so that buildings can be implemented almost *ad hoc* in relatively small but self-contained grids which are automatically linked functionally and visually to the whole.

The canal complex besides its drainage function, provides a network for boating and recreation, and gives the campus a traditional feeling. Pursuing this setting, the buildings are envisaged as "modern traditional" architecture, i.e. consisting of prominent roofs on stilts (actual or implied) reflected in water.

The Main Campus Buildings

All the buildings are 62.40 metre square with an internal courtyard of 31.20 metre

square. The basic column grid is 7.80 metres. Structure is reinforced concrete with prefabricated floor panels and steel trusses for the roof. Roofing is asbestos corrugation coloured after traditional tiles. The government fixes the ceiling unit cost at US\$144.5 per square metre for enclosed built area. Five buildings were designed by SJA for Phase 1 (1985-6).

The "Dom" Building:

This is the central administrative building. It is organised on three floors around a central courtyard and has a connecting structure (or "sculpture") in the shape of a spire, the university symbol. (The down-town Bangkok campus has such a spire in an old building).

The ground floor is mainly a *piloti* space so that the prevailing south-westerly wind enters the court to give a good ventilation to the non-airconditioned rooms on the north side. Otherwise one part of it contains the registrar and bursar offices, a clinic, cooperative shops and a post office.

The first floor contains offices for the Rector, the Vice-Rector, lecturers and administrative officers, linked together by an open balcony passage on the courtyard side. Two projecting balconies in the form of traditional pavilion look down onto the courtyard.

The second floor contains meeting rooms and temporary lecture rooms for 600 students. The latter will move to other buildings in the future to provide more offices and meeting rooms in the administrative building.

The total area is 7,423 square metres excluding the *piloti* space.

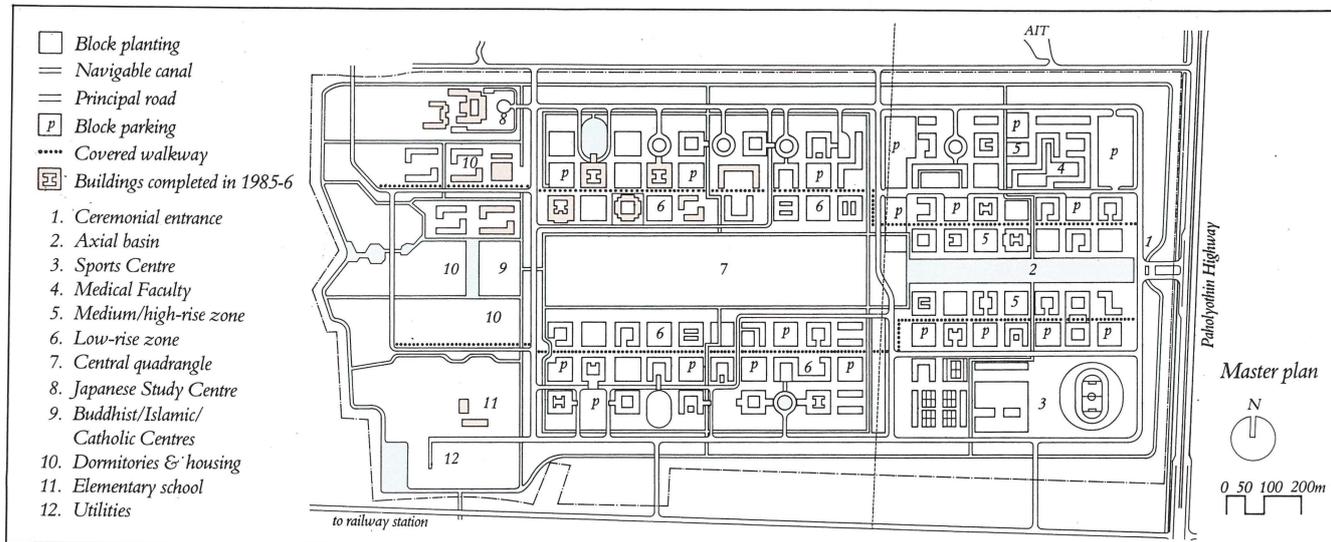
Central Lecture Building:

This two-storey building is geared mainly for the new faculties in science and technology, but will also be used initially for other classes.

The ground floor is mainly open for ventilation giving an ample *piloti* area much needed for students in this hot climate. One part of it contains the lobby for the main lecture hall or auditorium, and a pen for laboratory animals.

The first floor contains laboratories for 270 students in chemistry, physics and biology, lecture rooms for 800 students and an auditorium with a seating capacity for 500 persons. A balcony passage runs around the courtyard with two traditional pavilions projecting onto it. It should be noted that although the same building and courtyard dimensions repeat in other buildings, the atmosphere and feeling

Text, photographs and drawings courtesy of the architect unless otherwise indicated.



Top: Overall view from the south. Photograph: Brian Taylor.

vary a great deal between them.

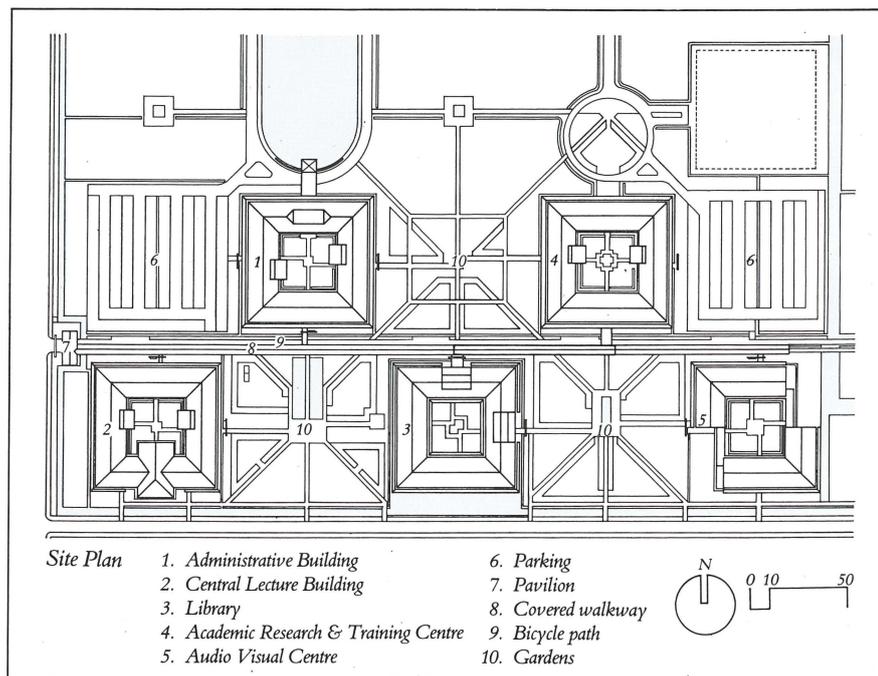
The total area of this building is 3,257 square metres excluding the *piloti* space.

Library:

The structure is traditional in concept, for, as in Thai monastery libraries, the building is on stilts standing in a body of water. (In the case of monasteries, this is to deter termites and thieves.) However, the building is at grade in the courtyard.

The building, all on one floor, contains the general library, reference and magazine sections, offices, work space and a meeting room. The rooms open onto the courtyard containing a lotus pond. The courtyard provides an open air reading area and is security tight book-wise.

The total floor area is 2,660 square metres.



Academic Research & Training Centre:

This is a two-storey building with the ground floor completely open.

The first floor contains meeting rooms, seminar rooms, offices and computer research cubicles. It also has a library with a passerelle connecting it directly to the main library building. As in other buildings a balcony passage runs around the courtyard with two pavilions projecting over it.

The total area on the first floor is 2,945 square metres.

Audio-Visual Centre:

The building, on grade, is divided into two L-shaped wings which are connected together by colonnaded arcades. Here there are sound and video tape recording studios, printing, slides and book production rooms, art production studio, language studio, offices and a meeting room. The total floor area is 1,723 square metres.

Architectural motifs

The traditional feeling is given by prominent roofs and eaves, stilts, and raised floors above ground or water. To enhance this, a cut-out abstract profile of the Thai house, a sort of "sculpture" of gable end and implied raised floor combined, is used in several places to accentuate axial approaches and links between the different buildings.

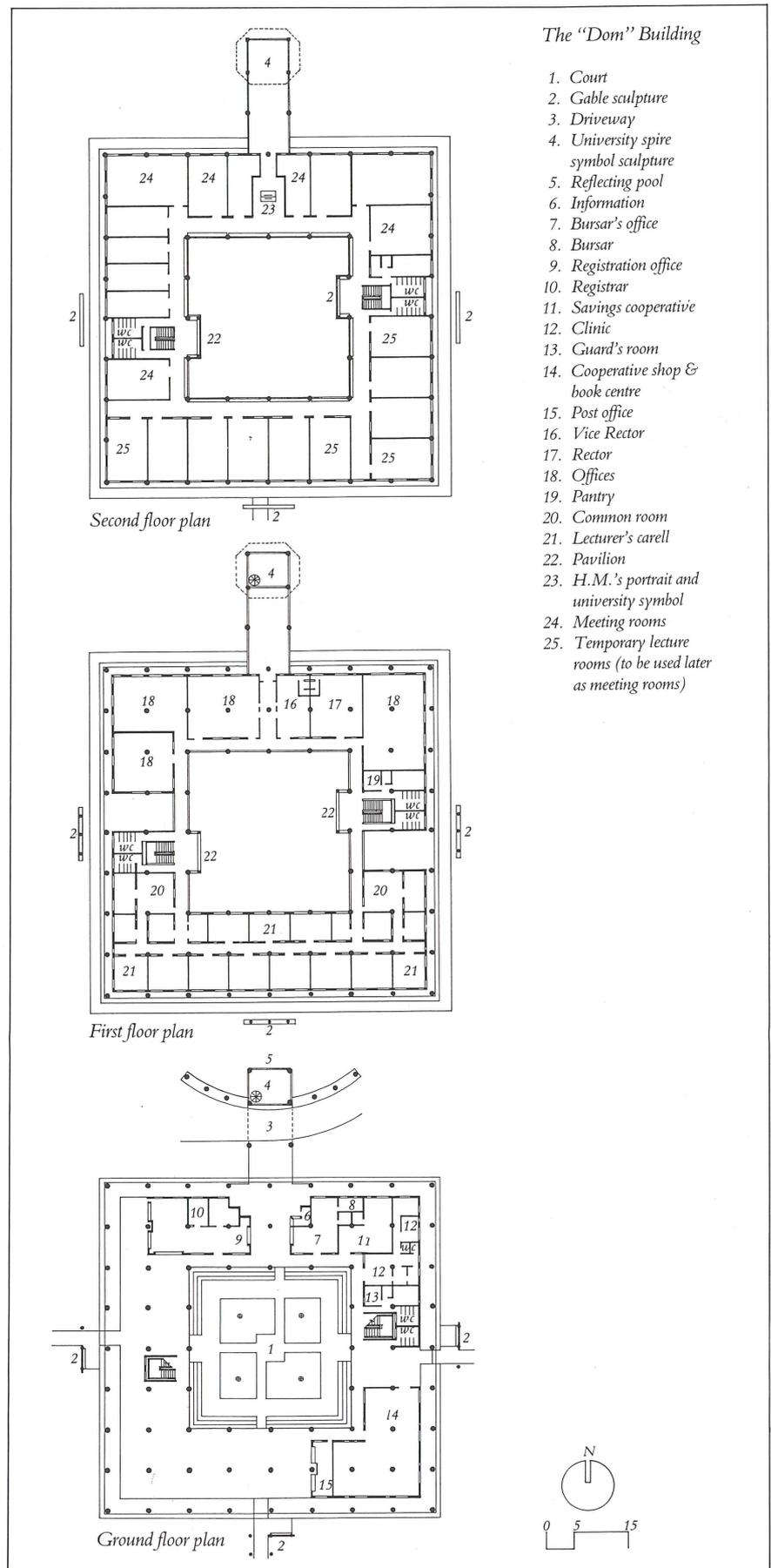
At the Audio-Visual Centre, the building is on grade for practical reason. But to give a feeling of the raised floor the above gable "sculpture" is used together with a cut-out profile of the raised floor which is built into the end elevations of the L-shaped wings.

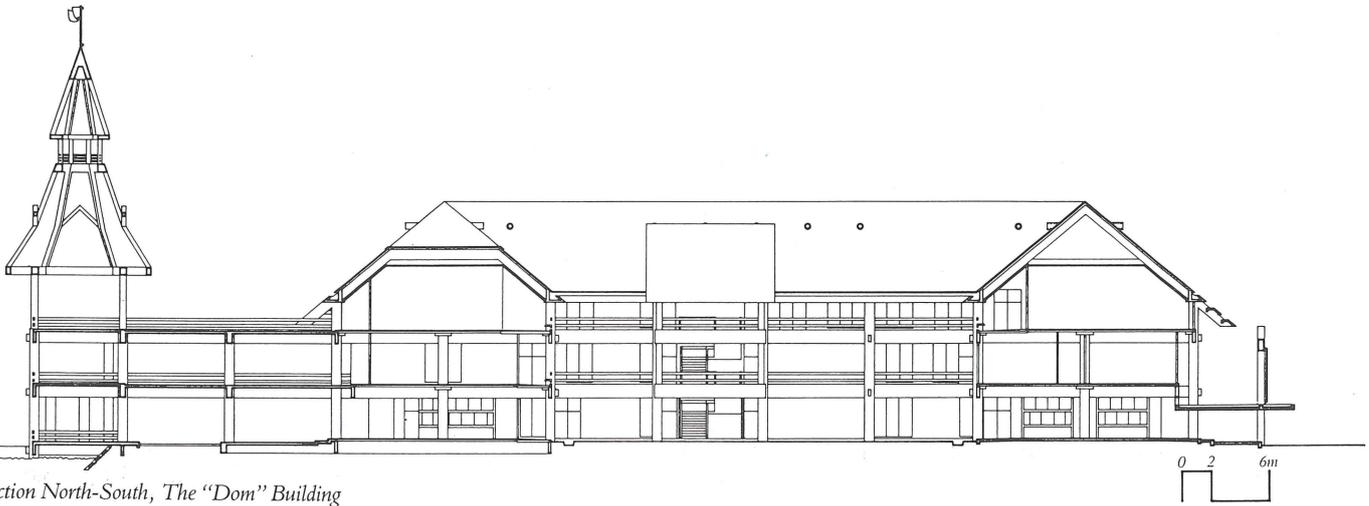
Phase 1 campus development is concentrated in an area northwest of the site away from the main highway due to the buildings which had already been committed before the adoption of the present master plan.

Existing and future facilities

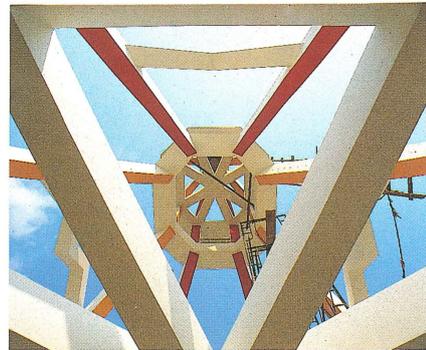
Besides the above buildings Phase 1 development includes dormitories for 500 female and 250 male students, a canteen for 1,000, the Japanese Study Centre, a graduate volunteer training centre, housing (70 flats for lecturers and staff, and dormitories for 60 personnel), a clubhouse, sports facilities, a kindergarten and a primary school for 240 children.

Altogether some 2,500 first year undergraduates and 500 lecturers and staff will be using the facilities at the new campus in 1986.

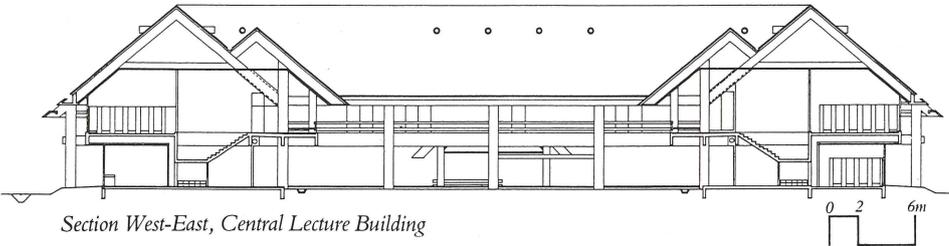




Section North-South, The "Dom" Building



The "Dom" Building
 Top: View of north elevation. (The reflecting pool in front is under construction and drained dry.)
 Above: The "Dom" or spire symbol of the university. View from under.
 Left: Overview of the east side of the complex with the Library in the right foreground and the Audio-Visual Centre in the background.

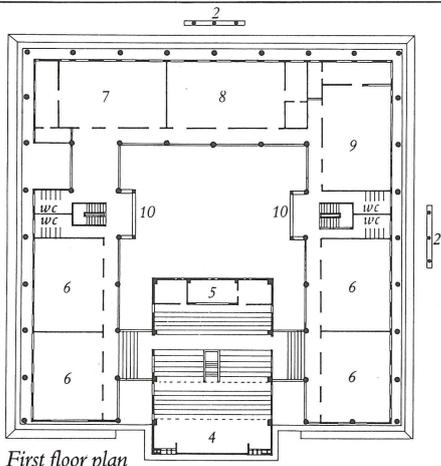


Section West-East, Central Lecture Building

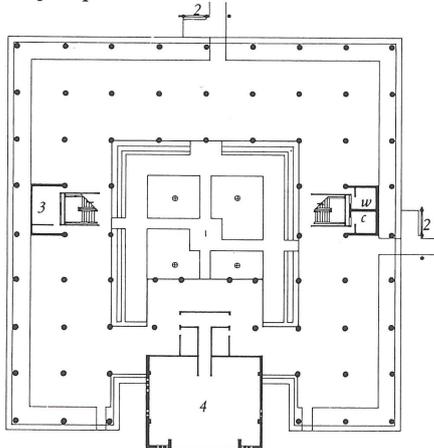


Central Lecture Building

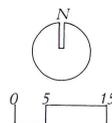
1. Court
2. Gable sculpture
3. Laboratory animal pen
4. Auditorium
5. Project & Mechanical rooms
6. Lecture rooms
7. Chemistry laboratory
8. Physics laboratory
9. Biology laboratory
10. Pavilion



First floor plan



Ground floor plan

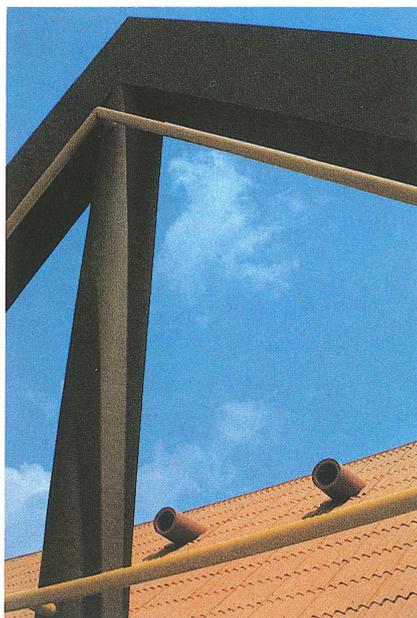
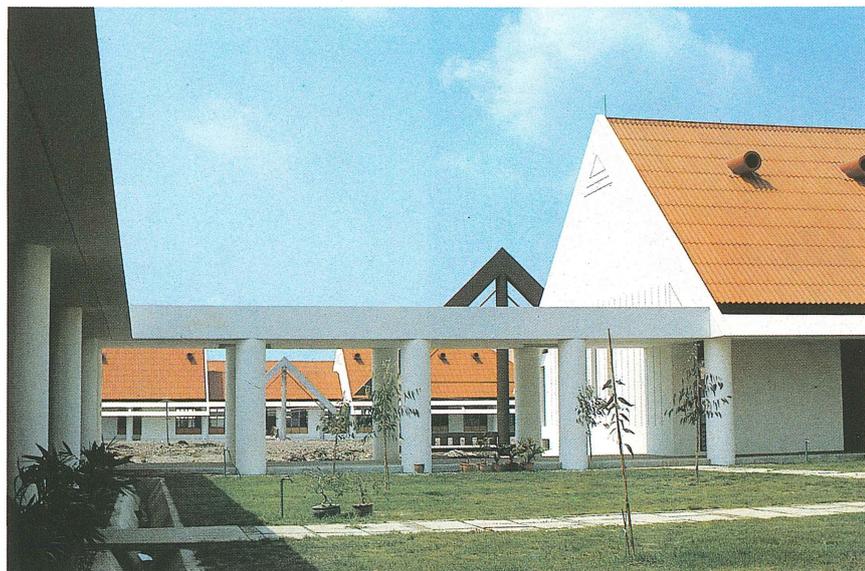
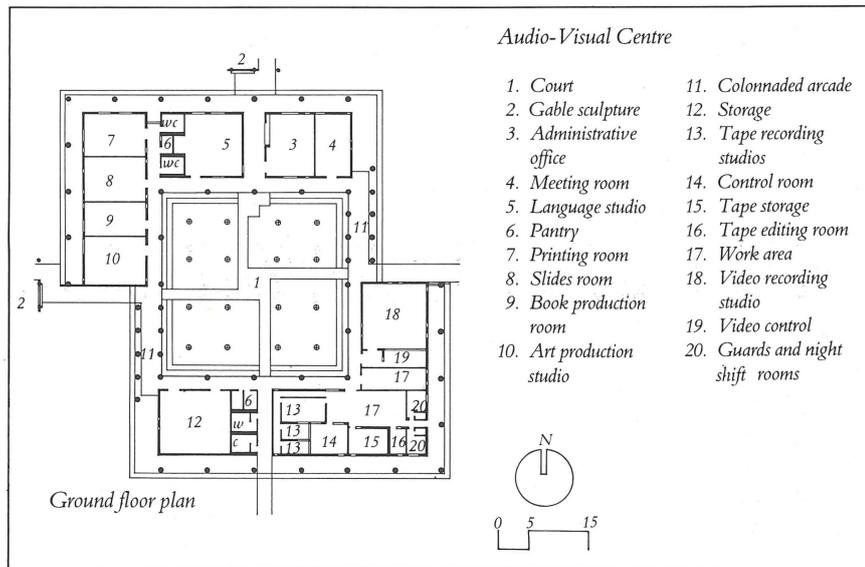
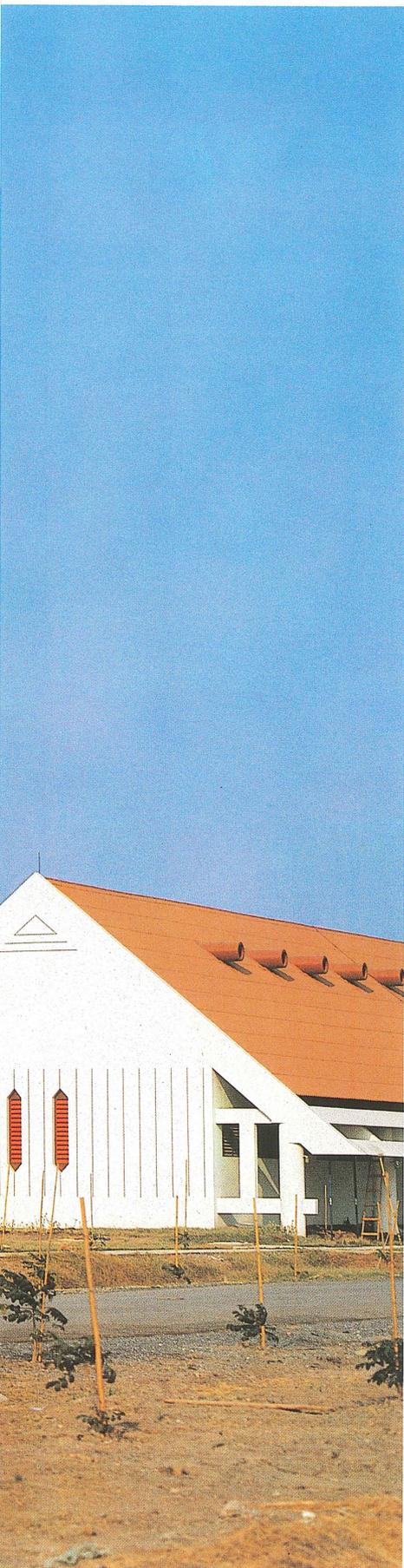




Central Lecture Building
Top, left and top: West side of the Central Lecture Building.
Above, left: Part of the south side of the Building.
Above and right: Auditorium at the Central Lecture Building seen from the courtyard.



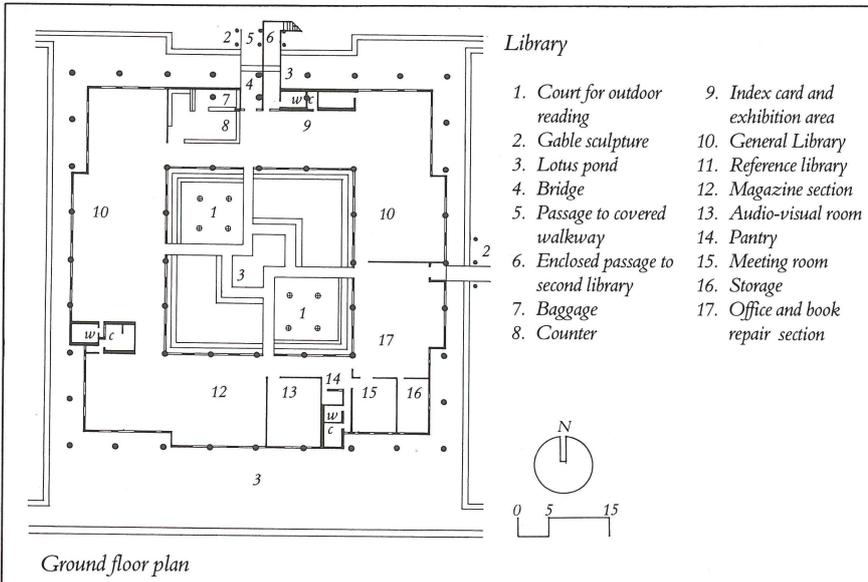




Audio-Visual Centre.
 Far left: The Audio-Visual Centre seen from the southwest.
 Above: View of the courtyard of the Audio-Visual Centre.
 Left: Details of the "gable" sculpture.



Library.
Left: East side of the Library.
Left, below: South side of the Library. The Audio-Visual Centre is seen in the background.



Sumet Jumsai is a leading architect in private practice in South East Asia. He is also an author of many articles and forthcoming books on the region.