The SPAFA Building Design:
How the Architect Had Gone through It

by Kamthorn Kulachol

Since its inception as a SEAMEO Regional Centre in July 1987, SPAFA has been housed in the present 8 × 15 metre office on the fifth floor of the Darakarn Building. It is the same old space occupied for years by the Coordinating Unit of SPAFA, when it was a project. Lack of working space for its presently growing staff, which has grown from six to seventeen in three years, has paralyzed SPAFA's potential to run at its fullest capacity. And this is not to mention its future expansion.

Hence, in 1989, The Royal Government of Thailand, SPAFA's host country, agreed to construct a new building to accommodate the whole functions of SPAFA. The Government of Thailand has provided a total budget of 29 million baht, an equivalent of US$ 1,160,000 for the new building. The new location of SPAFA headquarters will be right in the heart of Bangkok's cultural zone. But it is not until early 1991 that the construction of the building, lasting for 20 months, could start.

The delay in the start of construction was caused by the difficulty in finding the right contractor. During that time, the building boom in Thailand was at its peak and the cost of construction materials kept soaring

DESIGN PROCESS

In the world of architectural practice in general, the architect, commissioned to any project, more or less follows the following design process: ANALYSIS-PROMOTION-DESIGN-CONSTRUCTION-EVALUATION.

Since the SPAFA Building Project was assigned to an architect also working for SPAFA as Programme Officer, the ANALYSIS stage was thus thoroughly and comprehensively worked out in early 1988.

The ANALYSIS stage usually consists of the Feasibility Study, Estimates, Location and Site, and Programming.

FEASIBILITY STUDY

Since the project is considered owned by the Royal Thai Government, this component was not needed. And it was understood that building specifications had to conform with the standards of governmental buildings.

ESTIMATES

The original estimate of the project, 12 million baht or half a million US dollars for roughly 2,500 sq.m., became an underestimate because the standard unit cost set by the government in 1988 became unrealistic in 1990. Subsequent estimates rapidly built up through negotiations with the government. Finally, it was set to around 25 million baht, or one million US dollars, in September 1990.

LOCATION and SITE

Before the project took shape in 1988, it was the Thai Department of Fine Arts (DFA) who thought of merging the SPAFA head office with its new building complex, at the location next to the National Library, the National Archives and the Division of Archaeology. As such, it is an ideal place for the SPAFA headquarters.

The first site selected by DFA for the SPAFA building was a piece

of land right behind the National Library. It was hardly accessible to the public and the proposed construction threatened the Library's security. However, after the first preliminary design had been worked out, relocation to a new site was proposed. It was then adopted in order to avoid future problems.

The Budget Bureau backed the relocation and suggested that the responsibility for the project should be held by the Office of the Permanent Secretary of the Ministry of Education. The suggestion eventually resulted in the independence of the SPAFA building from the DFA building group.

The idea of finding a new site was split into two : one, at the same location and two, at the vacant land next to the Darakarn Building, where the SEAMEO Secretariat Office is situated. The dispute was settled by the Deputy Minister of Education in charge of foreign affairs. He reasoned that since the former location is surrounded by various cultural institutions, it should be a better site.

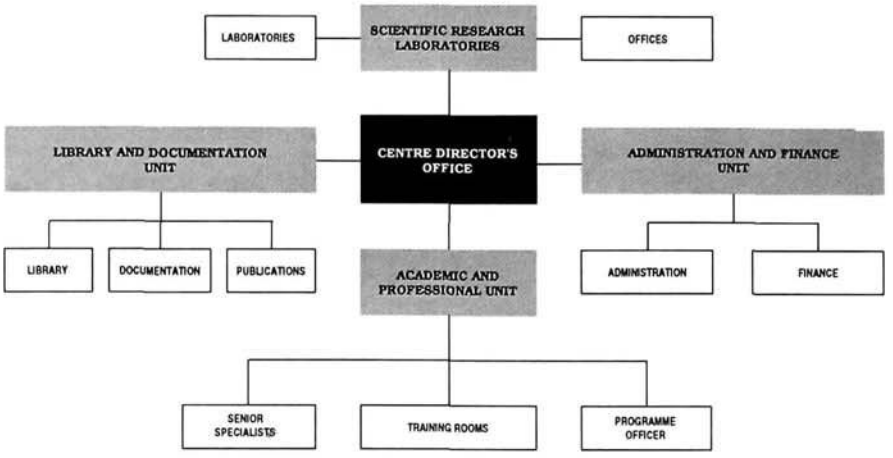
Consequently, a piece of land, approximately 1,200 sq. m. (27m×43m), in front of the new DFA building group on Sri Ayutthaya Road, was finalized as the site for the SPAFA headquarters building.

At this new site, the building has faced the main road on its south with an internal driveway on its east. It is also trapped in the second ring, centred by the King's Palace. In this area, there is a restriction on the building height : maximum 20 metres.

PROGRAMMING

The final stage before getting into the actual design work is the de-

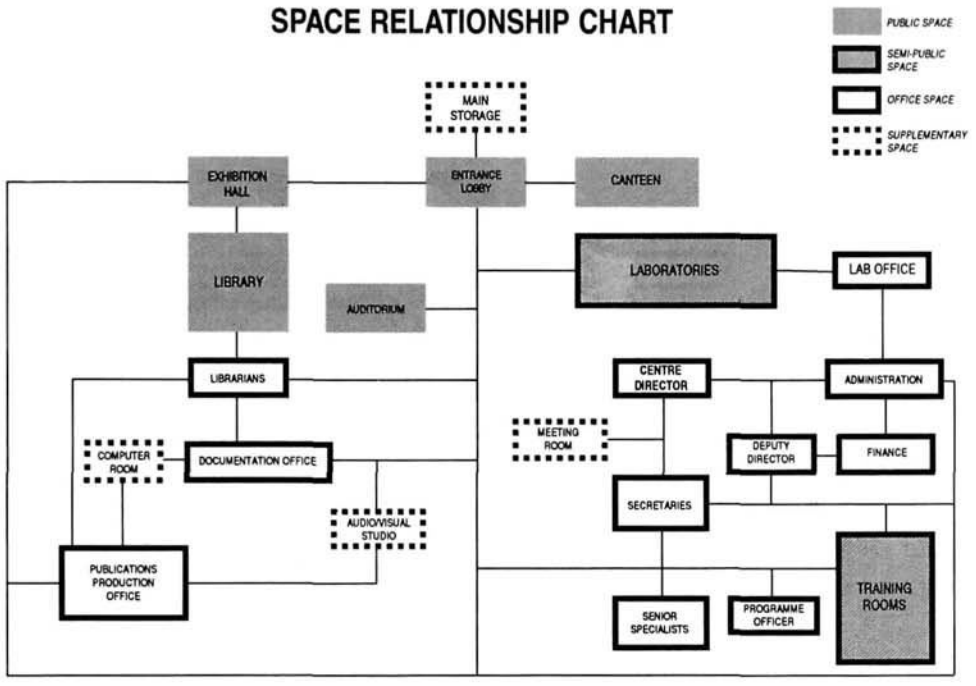
FUNCTIONAL DIAGRAM



LIST OF SPACE REQUIREMENTS

	FUNCTION / SPACE	*Required Sq.M.*
1	**ADMINISTRATION AND FINANCE UNIT**	
	- Administration Working Space	50
	- Finance Working Space	40
2	**ACADEMIC AND PROFESSIONAL UNIT**	
	- Senior Specialists' Offices	120
	- Training Rooms and Workshops	300
	- Programme Officer's Office	30
3	**LIBRARY AND DOCUMENTATION UNIT**	
	- Library (Reading Room and Stacks Space)	160
	- Librarians' Offices	50
	- Documentation Office	90
	- Publications Production Space	120
4	**SCIENTIFIC RESEARCH LABORATORIES**	
	- Laboratories	350
	- Lab Office	80
5	**CENTRE DIRECTOR'S OFFICE**	
	- Centre Director's Room	50
	- Deputy Director's Room	30
	- Secretarial Working Space	50
6	**PUBLIC/AUXILIARY SPACE**	
	- Auditorium and Meeting Rooms	90
	- Audio-Visual Studio	40
	- Computer Room	50
	- Canteen	120
	- Exhibition Space	90
7	**MISCELLANEOUS**	
	- Another 30% of the total space are needed for Rest Rooms, Storages, Coffee Room, Mechanical Space, Lobby and Corridors, Guard's Room, and Parking.	
	TOTAL approximately	**2,500**

SPACE RELATIONSHIP CHART



velopment of a design programme. A good design programme should reflect the client's needs, consisting of systematic inventories and flow charts showing the function and the space requirements as well as space relationship.

For the SPAFA headquarters building, four main function requirements were identified:

1. Administration and Finance Unit
2. Academic and Professional Unit
3. Library and Documentation Unit
4. Scientific Research Laboratories

All of the above are directly connected with the Centre Director's Office as shown in the illustrated **Functional Diagram.**

The space requirements or the breakdown of each function, with rough figures required for each floor space, appear in the illustrated **List of Space Requirements.**

And in order to understand the relationship among all the spaces on the list, a **Space Relationship Chart** was developed to assist in the design stage.

The PROMOTION stage for this project was not significant as compared to the buildings designed for commercial purposes. In promoting such buildings, a great deal of public relations, communications, financial planning and land acquisition are essential.

The only promoting method used by SPAFA was publicizing the concept and the schematic design to the host government and its governing board members. Feedback and criticism were considered for the improvement of the building design at a later stage.

DESIGN

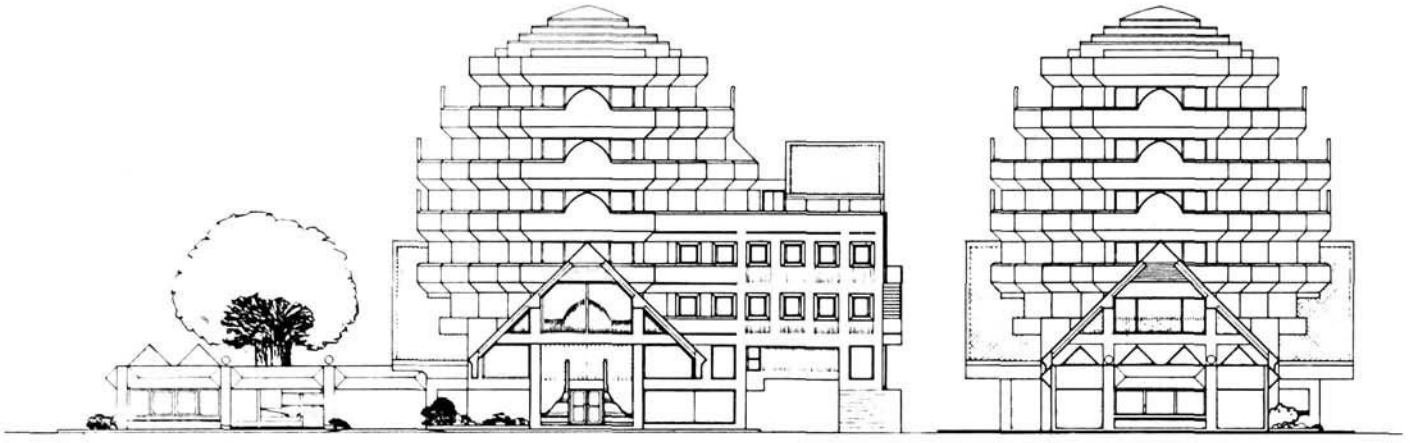
When an architect approaches his/her design work, a concept or a creative idea or a basic philosophy of the design must be conceived. Two methods, mostly used in approaching the design task, include the Intuition Method and the Systems Approach Method. The former was widely used in the past but it is still practical in developing societies. The latter is more accepted and fit for developed countries.

From the early 20th century modern architecture to the post-modernism today, the universally accepted design principles have evolved from "Form Follows Function" to "Function Follows Form" and to "Architecture with Cultural Implications".

DESIGN CONCEPT

The design concept laid for the SPAFA headquarters building blends these principles together. This can be expressed in the following abstract terms:

1. Function and form go together hand-in-hand and in harmony with the surroundings.



▲ The front and side views of the original design, reminiscent of a lotus-shaped structure.

2. The Southeast Asian regional cooperation should be reflected and symbolized.

3. The Southeast Asian culture should become the body and soul of the building.

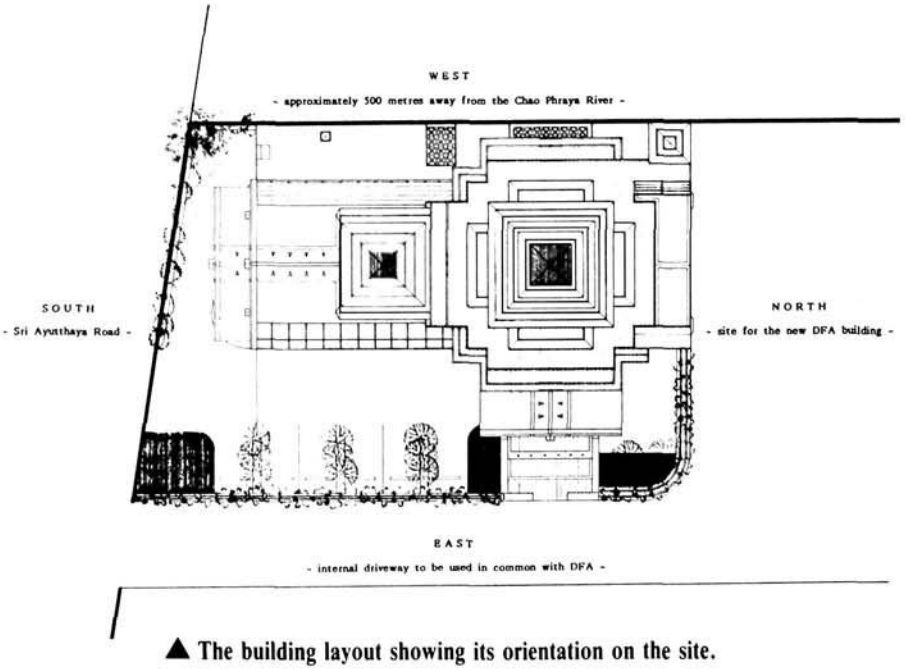
4. A contemporary sense should be felt and facilities for modern comfort should be equipped

5. Materials and techniques of construction should manifest the architecture of today, not an imitation of yesterday's architecture.

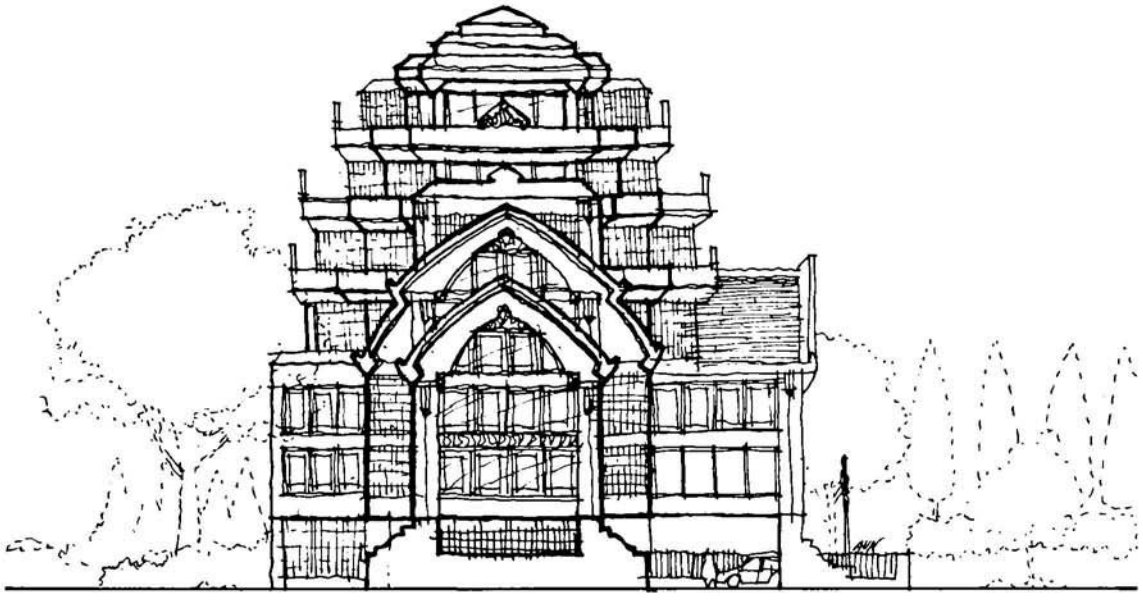
DESIGN DEVELOPMENT

The first preliminary design was developed for the construction on the first site. It was tried after the said concept in an eight-storey structure. The ground floor consisted of the library and exhibition room in the core building. A single-storey canteen was separated but linked together with an open space. The scheme was developed with respect to the existing garden, to keep the trees intact. The mezzanine floor acommodated working spaces for the library staff. The second floor was designed for the general staff, the third for administration and the fourth for training, workshop and seminar purposes. The top three floors, dwindling towards the rooftop, were dedicated to laboratory uses. The building, facing east, resembled a style of Khmer monument. It gracefully stood in the shape of a lotus, a symbol of Southeast Asian civilization, to many observers.

After the present site was determined, the second preliminary design had been developed. It was adapted to fit the environment and the shape of the land. As much as possible it followed the planning pattern of the first design . But this time, no trees existed and the orientation of the building had changed to the north-south direction. Hence, the separation of the canteen was no longer necessary.



▲ The building layout showing its orientation on the site.

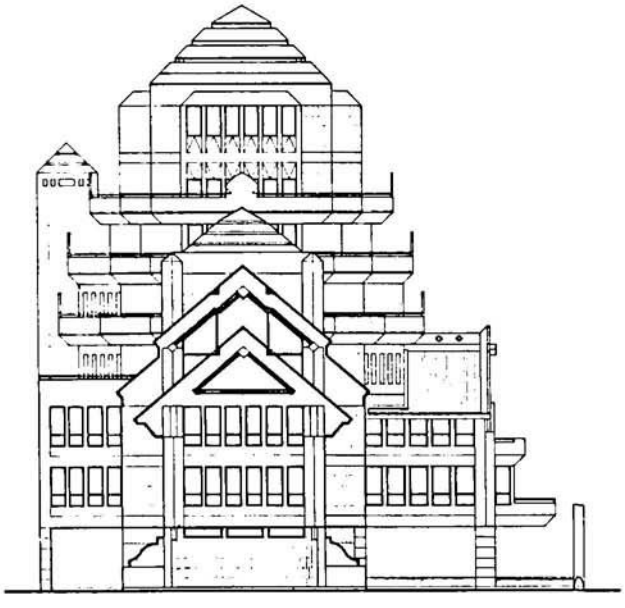


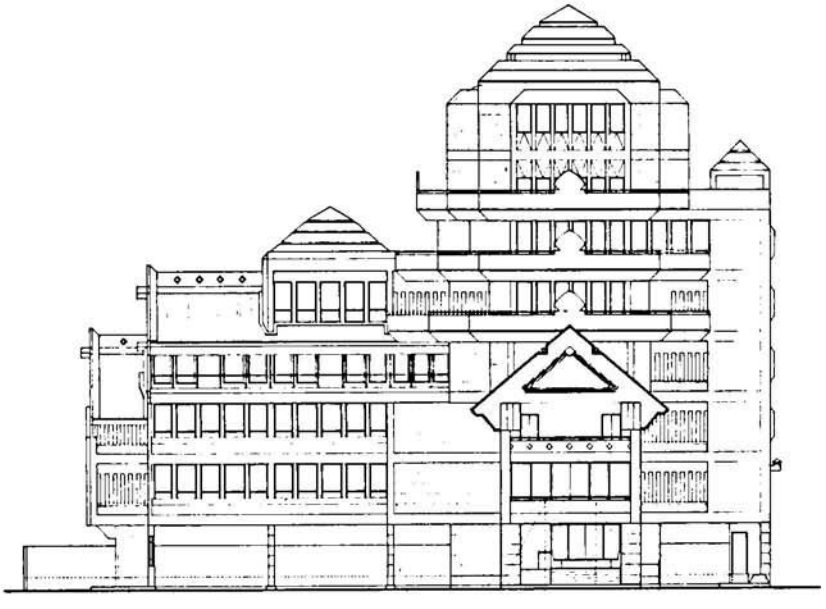
Due to a limited ground space, parking was brought under the building. It occupies the whole ground floor. The library, exhibition hall and canteen were shifted to the second level. The total height of the building then exceeded the height limit of 20 metres. A free-hand sketch and subsequent refined drawings show the new look of the building which became much slimmer.

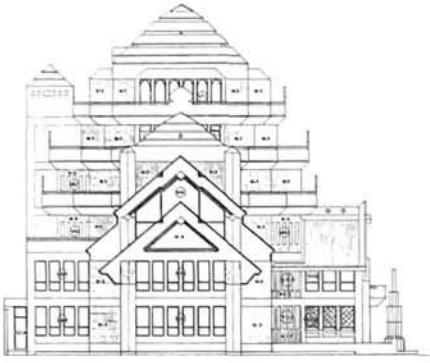
The final development lowered

▲ A free-hand sketch of the new design for the present site.

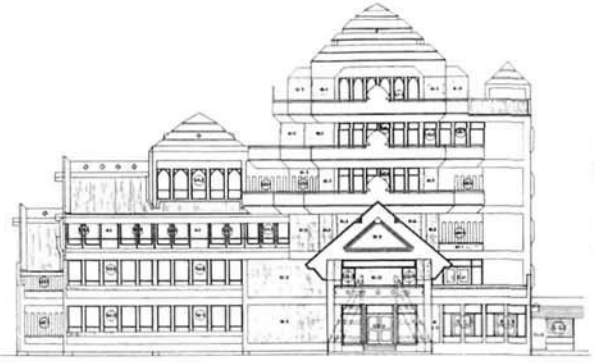
▼ The refined drawings of the front and side views of the new design – a slimmer look with parking underneath. It, however, exceeds the 20-metre height control.





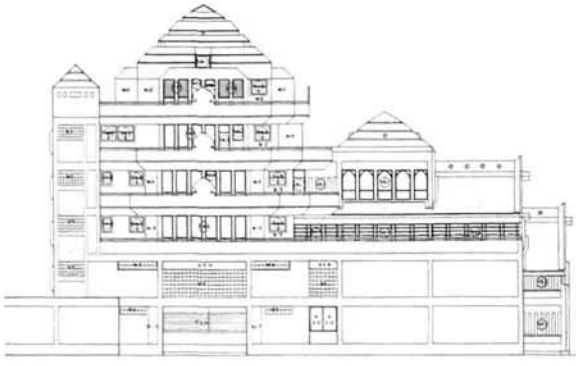


FRONT ELEVATION



EAST ELEVATION WITH THE ENTRANCE THROUGH SPLIT GATE

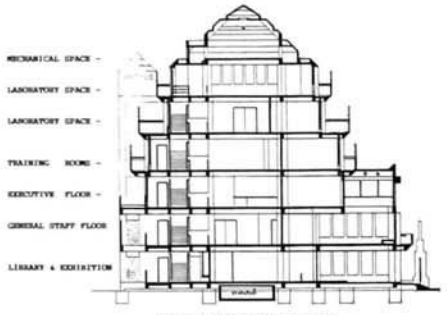
◀ The elevations of the final design. One floor on top and the groundfloor parking were eliminated in an effort to conform with the height limit.



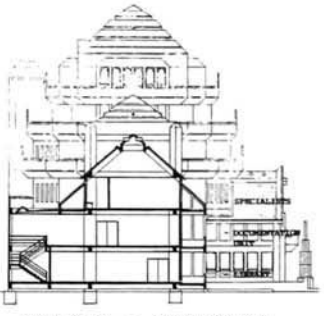
WEST ELEVATION FACING THE CHAO-PHRAYA RIVER

BACK ELEVATION TO THE NORTH

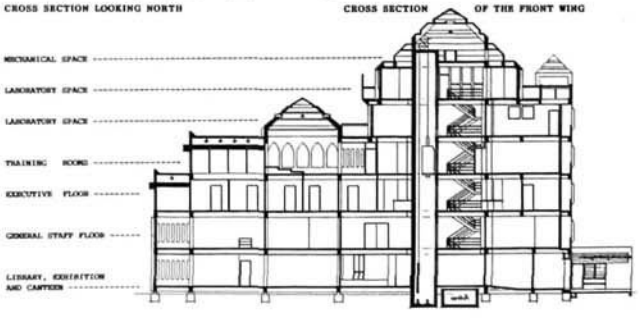
the building down to meet the required maximum height of 20 metres. This was done by eliminating one floor on top and the groundfloor parking. The building now has only six floors. However, the design concept is still maintained. The character of the building, in order to spell out regional cooperation, is composed of building elements from the member countries. For example, there is an Indonesian-styled split-gate at the entrance, Malaysian-styled pointed-arch openings, Philippine-styled ornamental motifs and a roofing inThai style. It is envisaged that the modern materials, like reflective glass, and modern technology would bring



CROSS SECTION LOOKING NORTH



CROSS SECTION OF THE FRONT WING



CROSS SECTION ALONG THE LENGTH OF THE BUILDING

▲ The cross section s of the final design showing spaces inside the building.

about the touch of modernism prevalent in Singapore. For Brunei Darussalam, maybe future interior decoration in some parts of SPAFA building will represent Brunei participation.

In creating a well-functioning building in a form that resembles indigenous culture and which harmonizes with the surrounding buildings the architect had decided on a form reflecting Khmer monuments. These structures were predominant in this ancient land a thousand years ago. The SPAFA building's character thus represents the mainland Southeast Asian architectural style, a style that once flourished and is still evident in this region.

FINAL PLANS

The functions and sizes of the building plans can be identified as follows:

Ground Floor : Library, Exhibition Hall, Canteen and Main Storage, totalling approximately 600 sq.m.

Floor II : Auditorium, Documentation Office, Publication Office, Audio/Visual Studio, Computer Room and Administration and Finance Unit. An outdoor space for holding a small party is also provided near the auditorium. The total space is approximately 600 sq.m.

Floor III : Centre Director's Office, Meeting Room, and Academic and Professional Offices, totalling 550 sq.m.

Floor IV : Training Rooms, including a theatre, covering 340 sq.m.

Floor V – VI : Laboratories and Lab Offices, covering approximately 425 sq.m.

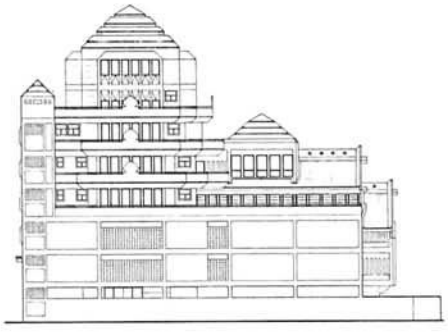
▲ **The architectural styles of the neighbouring buildings are in line with that of the SPAFA building.**

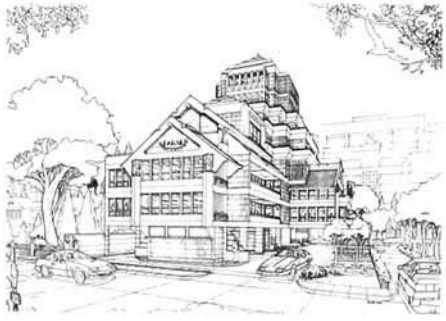
IMPLEMENTATION

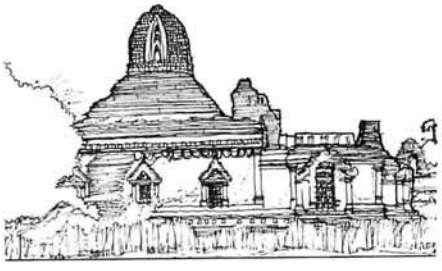
The final stages, CONSTRUCTION, and EVALUATION, have yet to be experienced.

CONCLUSION

From 1988 to 1990, the project had overcome a hundred problems. It faced difficulties not only in ac-

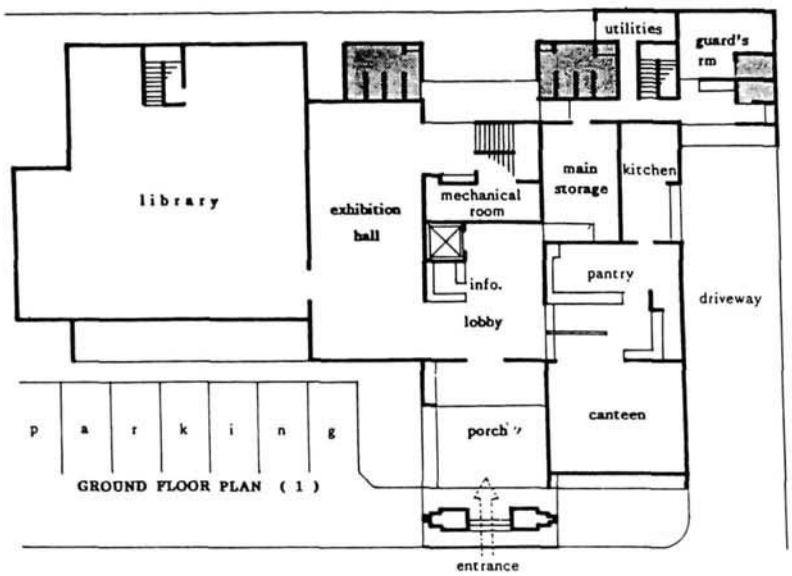




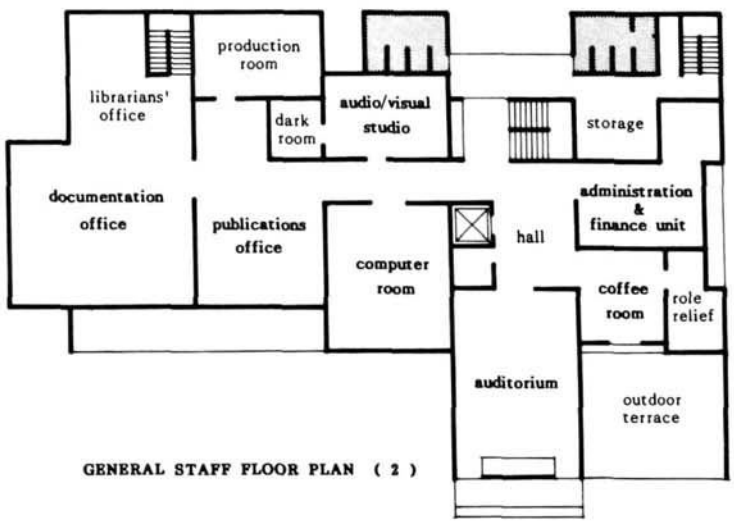


▲ **Similar structural forms were later found between the SPAFA building and the Kubyuak-gyi Stupa at Pagan.**

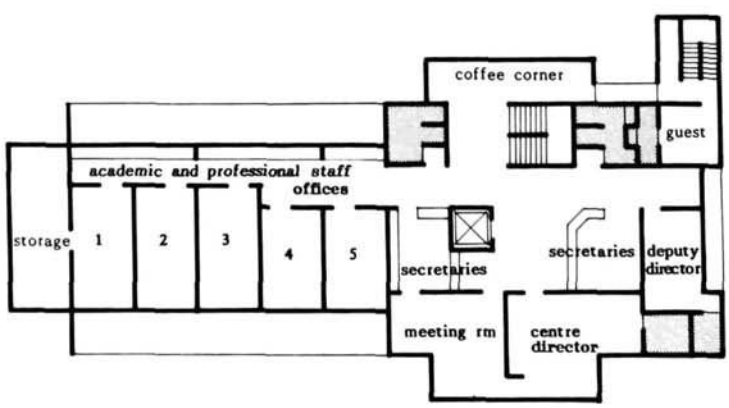
▲ **SPAFA building and Pagan's Ywa-haung-gyi Temple : a coincidence in angle and composition.**



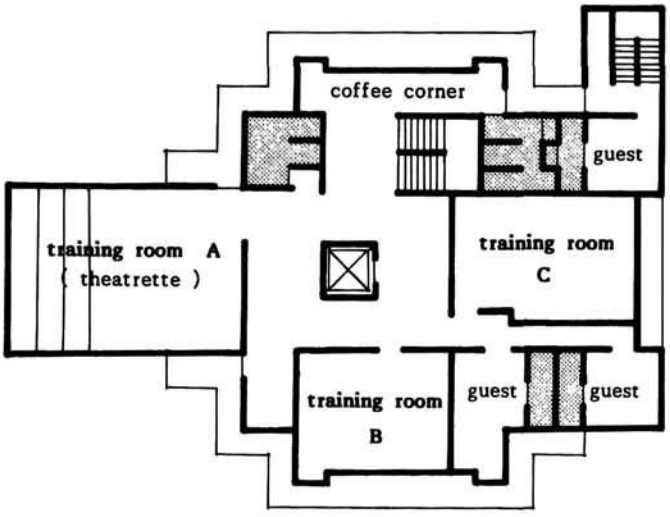
GROUND FLOOR PLAN (1)



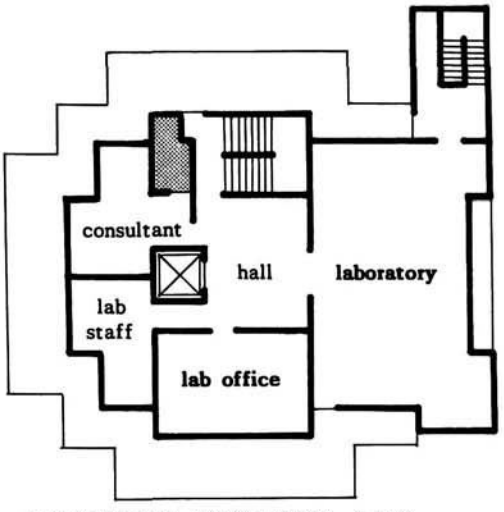
GENERAL STAFF FLOOR PLAN (2)



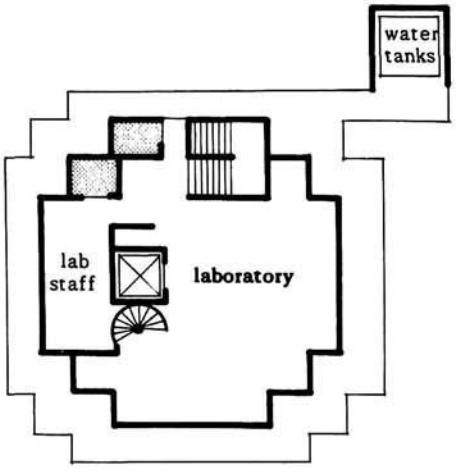
EXECUTIVE FLOOR PLAN (3)



TRAINING FLOOR PLAN (4)



LABORATORY FLOOR PLAN (5)



LABORATORY FLOOR PLAN (6)

quiring the land and the budget, but also in the most difficult task, the bidding process. The ground breaking in January 1991 and the signing of the contract between the Ministry of Education and the contractor, the Ch. Nondhachai Co., in the same month were indeed the points of departure from the DESIGN stage. They marked the start of the project execution.

REFERENCES

Auboyer, Jeannine and Others. **Oriental Art: A Handbook of Styles and Forms.** London: Faber and Faber, 1979.

Bussagli, Mario. **Oriental Architecture.** New York: Harry N. Abrams, 1973.

Heath, Tom. **Method in Architecture.** Chichester: John Wiley & Sons, 1984.

Hunt, William D.Jr. (Ed.). **Comprehensive Architectural Services.** New York: McGraw-Hill, 1965.

MacShane, Frank. **Many Golden Ages.** Tokyo: Charles E. Tuttle, 1963.

Turner, Hamilton H. **Architectural Practice and Procedure.** Essex: Anchor Press, 1974.