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**REPORT ON A VISIT TO SEVERAL  
SOUTH-EAST ASIAN UNIVERSITIES BY IPB'S  
PLANNING AND DEVELOPMENT TEAM  
DECEMBER 2 - 24, 1978**

**BY  
INSTITUT PERTANIAN BOGOR  
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**ACKNOWLEDGEMENT**

Almost all South East Asian Universities are at present in a process of development or expansion. It was thus considered very appropriate from the standpoint of IPB's recent development that it's planning and development team would visit several ASEAN universities to discuss and exchange views and opinions on university planning and campus development.

This visit was made possible by a grant from USAID. I would like to thank the USAID mission in Jakarta for their assistance given and the University of Wisconsin Madison with whom we have such close ties for their valuable help in the preliminary preparation of our campus development project.

I sincerely hope that all our combined efforts will lead towards IPB's development into a mature and better qualified institution of higher agricultural education in the region.

January 1979

**ANDI HAKIM MASOETION**

**Rector  
Institut Pertanian Bogor**

## Introduction

As a part of Institut Pertanian Bogor's Development Program in particular the development of IPB's Darmaga Campus, the Planning and Development Board at IPB considered it to be very important to exchange and discuss views and opinions with university planners at selected South-East Asian Universities with a main interest in agricultural sciences. In the process of discussions, the IPB team would have a chance to crystallize the new ideas and fundamental thoughts about the development of the Darmaga Campus as the new site of IPB's academic program facilities.

Accordingly, the team planned a tour to the following Universities and campuses :

1. The University of the Philippines, Los Banos and Dilliman campuses.
2. Kasetsart University, Bangkok, Thailand.
3. Universiti Pertanian Malaysia.
4. University of Singapore.

The visit took most of the month of December, from 2-24, 1978.

For practical reasons, the report will be divided into 4 main parts, each dealing with a particular University. Each part will focus on the academic planning, organization, structure, management and physical planning and construction of facilities and will highlight those aspects which are considered by the team to be important in regard to IPB's own organization, structure, management and planning and construction of facilities.

## The University of the Philippines System

### University of the Philippines, Los Banos

UPLB (University of the Philippines, Los Banos) was visited by the IPE Planning and Development team from Sunday 3 to Wednesday 7, 1978. UP Dilliman campus was visited on Thursday 8, 1978. While in Manila, the team paid visits and consulted with the architects and planners of university campuses, Concio and Comptech Asia.

The development of UPLB according to a planned and integrated approach started with the first 5-year development program in 1963 with assistance from a World Bank loan. At this moment, a second development program, also with assistance from the World Bank is in implementation. A more detailed description of UPLB's past, present and future was obtained from their pamphlet "The Making of A University", made available to the team by UPLB's Public Relations Manager.

While the UPLB was already established in 1909 as a College of Agriculture, with 12 students and 4 teachers its programmed and planned development started only in 1962 when 3 professors from the USA visited the campus and assisted in drawing up a development plan. The second development plan however was developed by UPLB's own planning and development unit, with assistance from the Deans of Colleges and the various Departmental Chairmen.

Long range planning and development at UPLB is done by a special unit headed by an assistant chancellor. An organization chart of UPLB is included as an appendix. It can be seen from the chart that the assistant chancellor has a very important position at UPLB.

The first part of the report is devoted to a description of the  
method used in the analysis and the results obtained and to a  
discussion of the same.

The second part of the report is devoted to a description of the  
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discussion of the same. The third part of the report is devoted to  
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Chairmen of all Departments are requested to submit their annual projections in terms of students, staff, requested facilities according to a standard format developed by the assistant chancellor and his staff.

Due to his role in planning and development, the assistant chancellor has also under his control, the Budget office which makes the allotments for the various programs and projects at UPLD. It does this however through the chancellors office and no direct line of command exist between the Departments and Deans on one side and the Budget office on the other hand. The Budget is prepared according to a system similar to the FFES or SP4 system now in use at IPB and the GOI Directorate General of Higher Education.

Management at UPLP is defined and strictly according to rules and regulations as set forth in two about 3-inch thick volumes of University Manual: Matters such as the amount of credit given to faculty for teaching, research and extension as well as for public relations activities, -for instance showing visitors around (0.07 units for 1 hour of visit-) are all quantified and make it possible to determine the amount of units or credits a faculty member has earned during one semester. This then will again be the deciding factor in salary, overtime, number of staff needed in a department, manpower development programs etc.

The team had ample opportunities to see the physical facilities, both existing and under construction. From the standpoint of area size, UPLP can be regarded as having enough space for expansion. On the other hand, the existing campus, designed from an academic masterplan in the 60's does not allow expansion as easily as could

be hoped for. The Main Library for instance, is not situated as central as needed, but rather beyond the academic zone (a circular zoning design was used at UPLD). Staff housing occupies a prominent area uphill and together with the student dormitories constitute a relatively large area.

At the time of our visit, UPLD was in the process of constructing buildings for the Faculty of Veterinary Science, now still at Dilliman campus, near Manila. According to UPLD, the reasons of moving Vet. Science to the rural area was to get it nearer to farmers and their problems. Not all the staff at Vet. Science were in favor of the decision to resettle at Los Baños, but the Board of Regents voted for the transfer and since then, not many objections have been heard or posed.

New centers and institutes are either housed in existing departments or will be situated outside the main academic core. We visited the Institute for Plant Breeding (IPB) which is currently under construction about 8 km beyond the academic center of UPLD. It seems that distances like this do not pose a problem to staff and students, even though the roads are not always good. One reason is of course the large number of jeepneys available cheaply for public transportation. In fact, almost all traffic in campus consists of jeepneys!

UPLD seems to be one of the few university campuses where sewage is treated before dumping into natural waters. While a sewage treatment plan is present, not all waste is treated. Questions raised by the team revealed that for instance the Animal Science waste products and also the Dairy Products Laboratory waste was just dumped into a small creek running nearby.

One feature at UPLR was rather unique for us. Commencement ceremonies are carried out in the open air in an area facing the large and impressive Auditorium. At all other universities we visited, the ceremonies are held indoors, sometimes even in buildings outside the campus if the university does not have a facility large enough to accommodate the audience.

#### The University of the Philippines, Diliman campus

The Diliman campus is located some 25 km outside the Center of Manila. Although not as vast as the UPLC campus our impression when entering the campus area was still one of large sized buildings and distances too far to comfortably walk. Two prominent faculties are in Diliman, the Medical School and Veterinary Science.

A fair amount of American students were enrolled in Vet. Science, apparently due to the difficulties of entering an American veterinary medicine institution.

It was difficult to obtain an accurate view of development at Diliman as there did not seem to be planning and development as intensive as at UPLR.

The Faculty of Veterinary Science which was visited did seem to manage a good job of educating the students despite the old and sometimes dilapidated state of most of the facilities. The faculty had an estimated 500 student body with some 100 staff.

Kasetsart University, Bangkok, Thailand

IPC's team visited Thailand from 9 - 14 December, 1978. The arrival of the team coincided with the opening ceremonies of the 8<sup>th</sup> Asian Games in Bangkok and was cause of much 'heat' between us and officials trying to "distribute" all visitors over the various hotels in Bangkok. This was the only stay at a hotel where we had to pay a 3 day deposit ! Our arrival over the weekend enabled us to become a bit familiar with a city where almost all written form of language was in Thai, which caused the Team much problems as nobody could decipher those Thai characters although they looked very similar to old Japanese writing !

Kasetsart University, the subject of our visit, has its main campus at Bangkhen about 10 km from the center of Bangkok. The new campus at Kamphaengsaen, about 80 km from Bangkok, is still under construction. At both campuses, discussions were held with the Rector, Vice-rector for Development and his staff and also with the Deans of the Colleges. A visit was also paid to the Project Implementation Unit of the new campus development project at Kamphaengsaen, constructed as a recruitment under the World Bank Loan rules.

As in so many developing countries, the origin of the University with its primary interest in Agriculture, can be traced back to the founding of schools by the Department of Agriculture, to provide the much needed manpower for its own purposes. The main difference with Indonesia's history is that Thailand's own Ministry of Agriculture opened those schools, in contrast with the Indonesian situation, where the Dutch colonial government was responsible for the start of agricultural education in Indonesia.

From the very modest start in 1904, to its raise in status to a University in 1943 at Bangkok, the campus has grown both in quality as well as in quantity. Simultaneously, the City of Bangkok's urban community has grown so fast that the Bangkok campus site is now completely surrounded by the city and expansion is very much limited to construction in the existing campus area. The campus land itself however does not completely belong to the University but also to the Department of Agriculture with which the University had and still has very close ties.

In the process of finding land for a new campus area, the Kamphaengsaen site was investigated and found suitable for its future role. Because the land belonged to farmers, it had to be bought and the farmers resettled. This was done with full cooperation and financial assistance from the government of Thailand. The new site is some 3000 acres large and is intended to house all the agricultural faculties now at Bangkok campus. American consultant university planners with financial aid from the Rockefeller Foundation, assisted in drawing up development plans for the new campus and remodeling of the old Bangkok campus. When visited, the construction was in its 5<sup>th</sup> year of the first phase development and expansion program, aided by a loan from the World Bank.

The discussions with the university planners showed that the university "masterplan" could not be adhered to completely, due to sometimes technical or financial obstacles. It proves that a masterplan should be drawn up with enough flexibility in it to permit minor changes to be carried out without impairing the overall merit of the masterplan.

## Organization

Kasetsart University is controlled by a University Council numbering 27 members. Seventeen of the members are ex-officio. They include the Secretary-General of the National Education Committee, the Rector and vice Rectors and all the Deans and Directors. Chairman and nine members of the Council are appointed by His Majesty the King upon the recommendations of the Council for two year terms. The University has the status of a Department under the Bureau of State Universities at the government level. This Bureau is directly under the Office of the Prime Minister.

## Academic Programs

At the present time there are eight Faculties: Agriculture, Economics and Business Administration (formerly Cooperative Science), Fisheries, Forestry, Education, Engineering (formerly Irrigation Engineering), Science and Arts and Veterinary Science. These Faculties all offer first degree and B.S. programs but Ph.D programs are not yet offered at this moment.

Although according to given information, the level of education in agriculture in Thailand is generally low the Kasetsart University teaching and research standards are such that it is assisting the agricultural faculties at the Universities of Chulalongkorn and Khon Kaen. It is probable that Kasetsart University will still continue to provide about 70 % of the country's graduates in the agricultural sciences.

## Development Plans

To fulfill its training and research program functions properly, in order to support the Government of Thailand's programs to modernize agriculture, a development plan (1958-1974) formulated with assistance from the Rockefeller Foundation was implemented.

This Development Plan consisted of two programs of development, carried out simultaneously namely the development of a new campus at Kamphaengsaen and transfer of the professional, production oriented courses and graduate studies in the faculties of Veterinary Science, Agriculture, Economics and Business Administration and Engineering to the new campus and secondly the expansion and reconstruction of the old campus at Bangkhen near Bangkok to insure that it can provide the necessary services at the main campus. Basic sciences will be situated at Bangkhen but the ultimate idea is to develop Kamphaengsaen into a complete university campus according to the University's long range plans and goals.

It is interesting to quote a few planning objectives which were mentioned in Kasetsart's Master Plan of both campuses. For Kamphaengsaen, the new campus development had as its objectives:

1. To develop the campus with an appropriate balance of land among the primary needs: teaching and research in buildings and in fields, faculty and student housing, the amenities, and service to the community.
2. To foster maximum involvement of the students in actual field situations and practices by locating buildings and field for ease of movement between them.

3. To create an attractive living environment for student, faculty and staff so as to attract and retain the best of each.
  4. To provide primary and secondary schools that will ensure the highest standards of scholarship and preparedness for university study.
  5. To provide certain social, recreational and cultural opportunities for the community as it develops.
- C. To create an identity for the campus: an attractive and safe entrance, and a series of aesthetic visual experiences that will convey the substance of the campus and its primary goals.

Many of the objectives quoted apply also in the development of IPR's new Darmaga campus and our planning and development team had a series of very informative discussions with the vice-rector for planning and his staff.

In the area of academic programs for the future, the next paragraphs will give an idea of what will happen both at the Bangkok and Kamphaengsaen campus :

At Bangkok, which will be the headquarters of Kasetsart University, the campus will become a center for the more laboratory-oriented research. After the first five years, it is likely that the proportion of graduate students at Bangkok will increase. Because of its restricted land area, the expansion of facilities will be limited to those considered permanently essential here, compatible with the development of the new campus at Kamphaengsaen.

At Kamphaengsaen, it is visualized that after the first five years of development, field research will be centered at this campus while the

faculties of Veterinary Medicine, Agriculture and related fields, all will be centered at the site along with what ever facilities of the other faculties at Bangkok would best serve the interest of the students. In time, depending upon resources and the evolving needs of Thailand, provision should be made for Kamphaengsaen's growth to include all the disciplines of a complete university.

Enrollment at Bangkok over the next 15-20 years (towards the year 2000) is expected to reach 8,000 to 10,000 students, including as many as 2,500 graduate students. At Kamphaengsaen, the student body is expected to reach 12,000 to 15,000, including 750 to 1,000 graduate students.

A visit to the Kamphaengsaen campus in development turned out to be most interesting and several observations could be made. Firstly, the campus is practically level with a very high water level. It is almost square in form, with a fence, dike and ditch surrounding the whole area (around 16 km of fencing!). Two entrances are provided, a main entrance leading into the administration area and a service entrance leading to a loop of roads around the faculty buildings. The actual construction of the buildings did not reflect the original architect's plans in the 1973 Master Plan, which was explained to be due to problems in cutting of budget appropriations. This points to the necessity of regarding the process of planning as a continuing, flexible process which can accommodate sudden changes in policy or budget. Also observed was the need for careful architectural programming and integration if several architectural firms are contracted to insure a harmonious blending of the various characters of the buildings and the surroundings.

### Other Universities in Bangkok

The original plan of visiting a couple of other universities in Bangkok to see their development was abandoned as we learned that these universities were all located within Bangkok and had no plans of developing facilities outside the city comparable to Kamphaengsarn. However, Dr Edi Guhardja, the team leader, visited A.I.T., located about 40 km outside Bangkok and obtained additional academic as well as planning and development material.

## State Universities in Malaysia

### University Pertanian Malaysia

Although the main objective of our visit to Malaysia was to visit Universiti Pertanian Malaysia (UPM) the opportunity to see three other universities, Universiti Kebangsaan (UK), Universiti Malaya (UM) and Universiti Teknologi Malaysia (UTM) was used to gather more material and information on campus development. It was indeed lucky that all universities had their main campus (still) in Kuala Lumpur or direct vicinity as it enabled the team to discuss campus planning with the university administrators and also visit several projects at the new campus sites under construction.

The Universiti Pertanian Malaysia (UPM) is situated at Serdang, some 40 km outside Kuala Lumpur. To serve its staff, the University has a regular bus-service between Kuala Lumpur and Serdang while students are all housed in dormitories in the campus.

In the campus, one can recognize an academic zone, a central administration, and services zone and the housing zones separated for students and staff. At the present time, a public highway dissects the campus in two but plans are under way to have public roads only off-side to the campus.

During discussions, it was concluded that UPM stresses more the physical planning and development of the campus and is not adhering to a firm academic masterplan. In fact, it seems that the facilities planned and constructed have been phased earlier than the corresponding manpower development. The lack of present teaching staff is alleviated by inviting foreign instructors to teach and assist in the

development of the various disciplines. A fair number of Indonesian professors are now at UPI for this reason.

The Library at UPI is located between the academic zone and the central administration/service zone and is the only library at UPI. We were told that UPI does not favor the presence of small departmental or office libraries as it reduces the efficiency of operation of the Main Library. The staff of the Library consists mainly of professionals on a full-time basis. A very good example of an Audio visual Aid unit was shown to us at this Library. It had for instance an abundant most up to date collection of slides, charts and films (reel) in the basic sciences to be used by instructors of Biology, Physics, Chemistry as well as tapes for English language instructions. It was also interesting to note that this three-storey building which holds more than 50,000 volumes of monographs and 1,200 titles of periodicals in the fields of agriculture and related sciences, was already considered too small by its staff and plans are being developed to build a bigger and better library.

At the discussions held, it was found that although several staff housing were provided at the Serdang campus, the majority of the faculty commutes between Serdang and Petaling Jaya, a newly constructed suburb of Kuala Lumpur. At the Serdang campus however, it was felt that housing was to be provided for essential personnel such as technicians, engineers for electricity and water supply, farm hands and security force.

A discussion on the UPI organization and management revealed that the Chancellor of the University is a political figure while the real

the real management and policy making lies in the hands of the Vice-Chancellor. Planning and development is one of his responsibilities.

### University Kebangsaan

The University Kebangsaan (UK), situated at Bangi is at the present time still under construction. In contrast to UPM which has its campus on almost flat land, the UK campus is situated near several low hills and has a relatively short history. It was established in 1970, near the Teacher's College in Kuala Lumpur with which it still shares some facilities. In 1973, the university decided to move to the new site at Bangi and invited consultants from Harvard to assist in drawing up a new campus plan for the 2500 acres site.

The principle of education at UK is to provide its students with a broad based education at the lower level and only go to indepth education at the second degree (graduate) level studies. The educationists at UK favor small classes of maximum 60 students to provide "semi-individual" training to students.

The translation of their masterplan into the physical outlay of facilities follows a linear pattern design with the administration, Great Hall and Mosque as the center's centralized facilities, while the laboratories and classrooms plus faculty buildings will be stretched out along a more or less linear fashion. At the periphery of this academic/administration/service area will be the dormitories and sports facilities. Their campus development is unique in so far as they also work closely together with municipal and regional planners to develop a neighboring city which is to serve the academic community

at UK in the future. To provide for the necessary separation between city and university, the public highway and sports facilities plus parks are placed in between.

The planners and designers at the site seemed to pay a lot of attention to the preservation of the natural environment such as woods, creeks, slopes of hills. Although UK was assisted by foreign consultants in its planning, we had the impression that their academic masterplan was not as elaborate and far sighted as for instance at UPLB, probably due to more severe limitations in expert manpower to implement academic programs and UK's young history.

The planning and development of the campus project is apparently also controlled by a Task Force headed by the Prime Minister, while the Chancellor of UK acts as adviser. Here, as is the case with UPH, the real planning is more from a couple of top people at the central (university) level, rather than coming from departmental or faculty planners.

Universiti Malaya (UK) was the third object of our visit. However, due to time problems (a weekend in between our stay at Kuala Lumpur) it was only possible to visit the campus on Sunday and no discussions could be held with University authorities. UK is a relatively small (in area) university located in a suburb of Kuala Lumpur. Several facilities such as the central classroom facilities, Faculty of Economics, a dormitory and the students cafeteria were visited.

### Universiti Teknologi Malaysia

The last University visited was Universiti Teknologi Malaysia, at present situated in Kuala Lumpur. A new campus is in the designing stages and will be located in Johor, at about 8 km from Singapore.

The University was established in 1975, but can boast of a long history as a technical institution, being started in 1925 as a technical school.

The University's Objective is to train students to become competent technologists who realize their responsibility towards the Creator and the society. Due to its structure as an institution for education in a limited field of studies (engineering) the UTM had to create two centers namely the Center for Science Studies and the Center for Humanities Studies to enable its students to obtain enough knowledge in Basic Sciences and General Education Courses. UTM's position is somewhat parallel to that of IPR in that it has no faculty of Science or Humanities, while at the same time, service courses in these disciplines are needed by all students enrolled. It is also compulsory for all students to enroll in Malaysian Studies. Muslim students are required to pursue Islamic Education while non-Muslim Students have to take Ethics. These courses are considered useful for moulding intellectual graduates with dedication, integrity and a high moral attitude.

The new campus will be able to absorb 6000 students which is double the present student body. As the academic masterplan has already envisioned 6000 as the maximum student body, the buildings are constructed with not much leeway given for future expansion.

The campus design follows that of a wheel hub with spokes. Center (hub) facilities will be the Library, Mosque, Student Union and Administration. The spokes will house the faculty buildings while students dorms will be at the periphery of the campus.

Here too, not much can be said about academic planning and future goals of the University. We got the very strong impression that as staff development has just started, the universities want to insure that their home coming staff are provided with sufficient research and teaching facilities which should be built now, while the money is available. Although the construction of facilities and the outfitting with equipment seems adequate and even excellent, few integrated planning has been used.

### The University of Singapore

As the final part of the team's visit to ASEAN Universities a visit was paid to the University of Singapore, Kent Ridge Campus, from December 20 to December 23, 1978. Although viewed from a location standpoint, Kent Ridge would still be called urban, the campus planners and designers have made it one of their main objectives to give this "campus within a city" a more rural look than would be thought possible, by clever incorporation of natural environment into the campus.

The Kent Ridge campus will have a future student body of between 8,000 - 10,000. Never in our visits to various universities did we see a more intense endeavour to create campus facilities not only according to the academic masterplan but also with a view towards efficiency of movement, isolation from the public on one hand while allowing the same public to enter the campus at a few select places destined to be "show windows" of the campus community, integration with the city planning and development, scenic views and last but not least blending with the natural environment.

In the evening of the first day in Singapore, the Team had a meeting with Ir. Heng Ta Cheang, the consultant campus planner from OD205, a Dutch based Consultant bureau already known to several IPB Team members from earlier meetings in Bandung in 1977. At the time, Prof. S.J. van Emben of OD205, together with his associates presented their views on campus planning at the invitation of the Indonesian Government, to a group of campus planners from various universities.

It was thus with great expectations that we met Mr Menq Ta Cheang and discussed with him various views and areas of interest in campus planning in general and particularly the Damaga campus development.

From these and following discussions held at Kent Ridge campus, where the Team had a good opportunity to look at the development of the campus and the management aspects of the development, one conclusion could be drawn already : the management and control of a campus building project should be given to a separate unit, staffed by full-time professionals in order that the project will be implemented efficiently. The University planning and development unit would only be involved in academic program planning and development of the university's future role and function in society.

Going back to the University of Singapore's role in the Nation, it could be seen that recently steps have been taken by the Singapore government to integrate the general or basic courses of the University with those given at the Chinese language oriented Nan-Yang University. The integrated campus of both Universities at Bukit Timah, houses the facilities of the Central Administration, first year courses and the Business Administration Courses. All courses are now given in English. Engineering, Sciences and Medicine will be taught at the Kent Ridge campus. There are no plans to move completely to Kent Ridge campus at present and the Bukit Timah campus will still be used in the foreseeable future.

The development of Kent Ridge campus follows the linear design principle, but taking into account the fact that the campus will be build around a hill.

The architects at Kent Ridge were clearly aware of the environmental consequences if the hill should be flattened. While good money could be made by selling the earth for land filling purposes near the coast, they decided that the green forested hill should be kept intact as a landmark. Consequently, the decision was taken to build the facilities on the slopes, thereby leaving the top of the hill ridge intact and green. The campus is thus dominated by a large green belt running roughly east-west while the buildings are constructed on the slopes of the hill, alongside the green belt. This green belt blends with the city greens on the east side while at the west side, the green belt is flanked by the central library and gives the central library users the added benefit of a beautiful scenic view.

A circular vehicular looproad was built around the campus, to connect city bus and other public and private transportation with the campus. At strategic places near this loop road, parking zones were built while pedestrian walkways connect the parking zones with the buildings. In the academic building zone itself, a "main level zone" was developed. The principle behind the main level zone was to create an efficient student and staff movement flow between the various instructional facilities in such a way that a student or instructor will never be more than 5 - 10 minutes away from his or her designated instructional facility. To enhance this main level zone idea, all ceiling of the main level zone facilities were given a different distinct yellow color. Staff and office rooms for administration as well as research facilities are all located either above or beneath this main level zone.

Buildings were interconnected by covered walkways or bridges over the few vehicular roads in campus, built for servicing and maintenance of those facilities.

A good use was made of the prevailing breeze by constructing the buildings with large windows which can be opened and by orientation of the buildings to take the best advantage of breeze and sunlight.

The highest level of the buildings was kept some 150 ft below the ridge's peaks to enhance the hill's grandeur. Most buildings are 3 to 5 storeys high with foundations and roofs constructed to enable an additional level to be constructed in future expansion. The buildings were constructed using a basic grid structure size. Extensive use of open concrete construction was seen at the campus, to lower maintenance cost as very little upkeep is needed.

One thing that Mr Meng Ta Cheang insisted on was that university planning should be done with an eye on uncertainty. In other words, although the planning was done to accommodate requirements or needs of some 10 - 20 years into the future, by the time facilities are finished, some of these might not fulfill all the expectations. It should be possible however to construct buildings in such a way that either a change in function or an alteration in construction can be done easily without incurring heavy costs.

Some additional notes:

Around 15 rolls of 35 mm color slides were made of all the facilities visited. It is however impossible to include these slide shots in the report. Neither was it considered feasible to discuss every aspect observed although several times we wished we could. The slides will become a source of information for IPP's team in future discussions of planning and development, not only of the Darmaga site, but also of existing sub campuses and future possibilities of development.

Also used were tape recorded interviews and discussions with University authorities at the various universities visited.

The published material on campus planning and development which the Team brought back was the cause of an extra suitcase purchase plus Sin. \$ 100.- on excess luggage in Singapore !

## ITINERARY

Date	Route	Flight
December 2, 1978	Jakarta - Singapore	SQ207
December 3, 1978	Singapore - Manila	SQ 66
December 3-8, 1978	Visit to UPLB, Manila, Dilliman	
December 9, 1978	Manila - Hongkong - Bangkok	PR300/SQ641
December 9-13, 1978	Visit to Kasetsart University	
December 14 1978	Bangkok - Singapore - Kuala Lumpur	SQ61/7108
December 14-19, 1978	Visit to UPM, UK, UTM, UM	
December 20, 1978	Kuala Lumpur - Singapore	SQ103
December 20-23, 1978	Visit to ...iversity of Singapore	
December 24, 1978	Singapore - Jakarta	SQ204

## IPB Planning and Development Team

## Academic Planning:

Dr. Ir. Fdi Guhardja                      Team leader

Drh. Ikin Mansjoer, II.Sc.

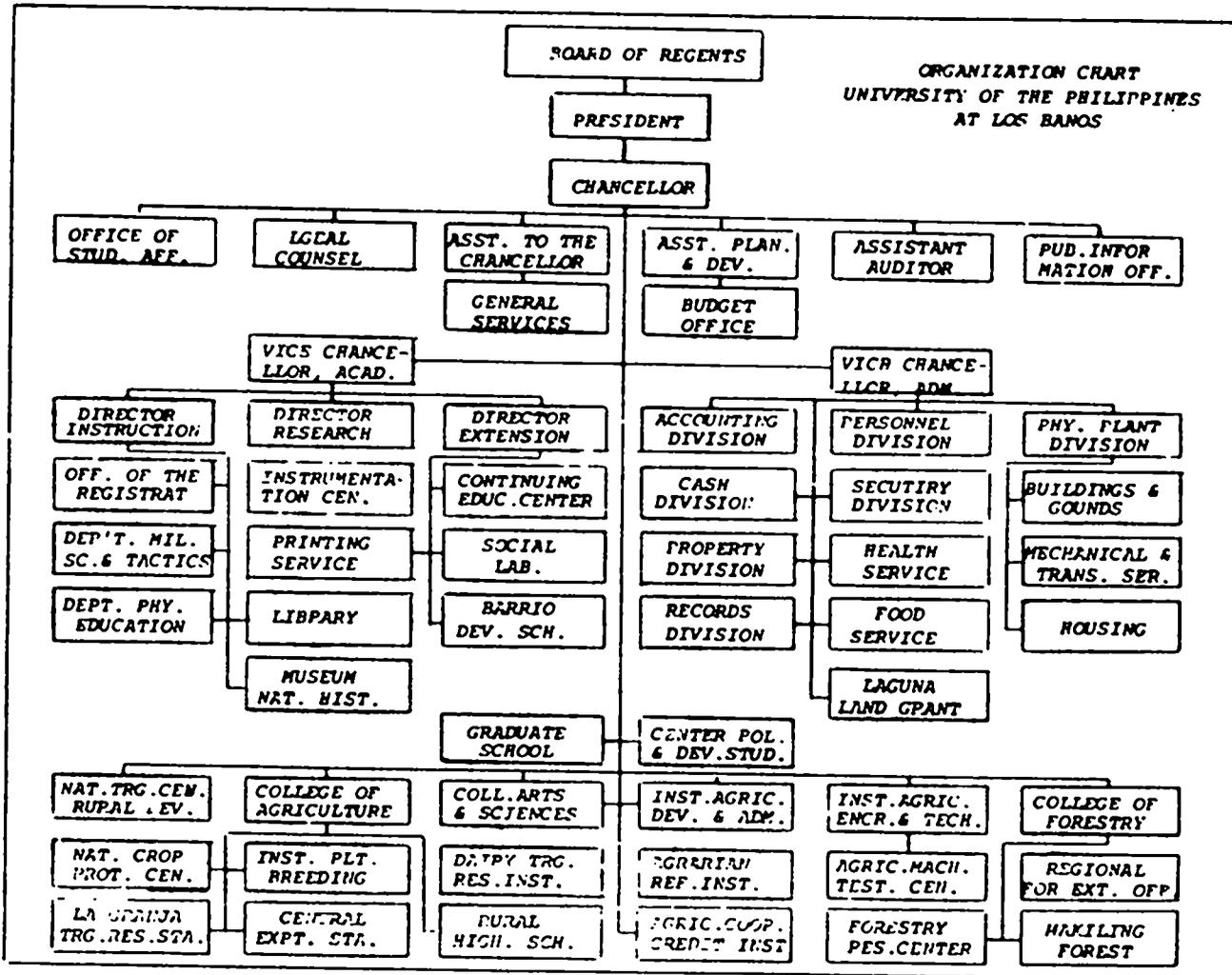
## Physical Planning:

Dr. Ir. Surjono Surjokusumo

Dr. Ir. Zahrial Coto

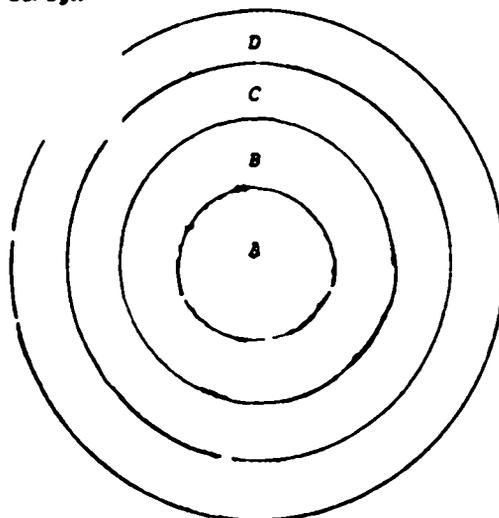
Ir. Bambang Pranggodo

Ir. Winerno Partaningrat



## Design Concepts

### I. Circular design



**A = General Services Zone, including** Central Administration  
 Central Library  
 Computing Center

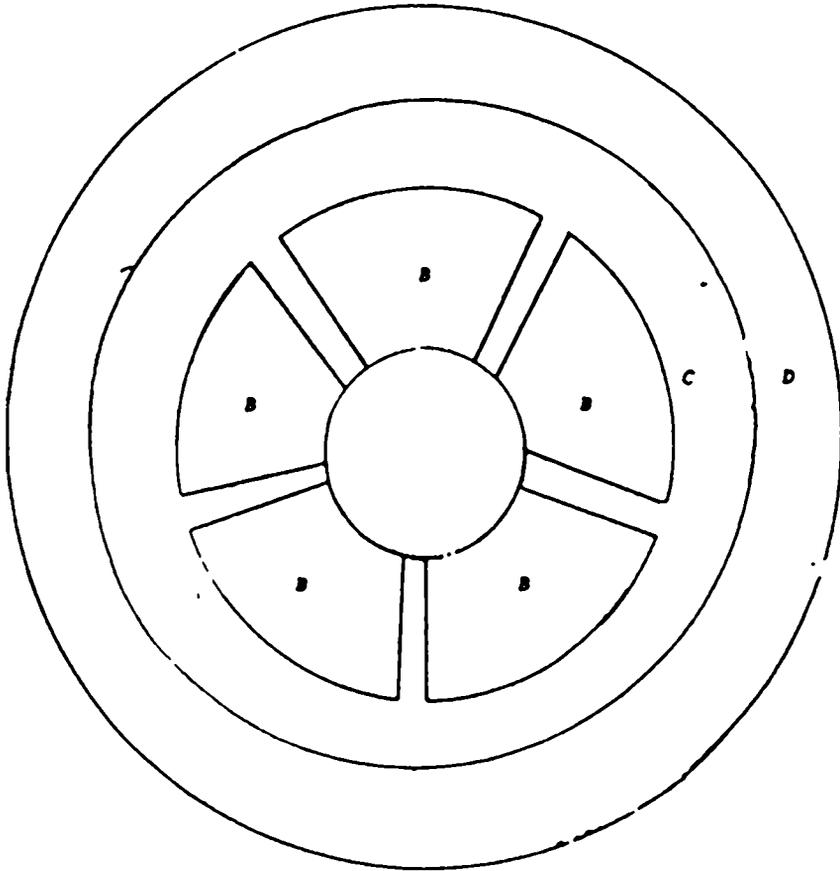
**B = Academic Zone, including** Central classrooms  
 Faculty and Departments  
 Laboratories, outdoor  
 Teaching/lab facilities

**C = Student Activities Zone, including** Student Union  
 Sports venues

**D = Housing zone** Dormitories  
 Grad. student housing  
 Staff housing  
 Supporting personnel housing

## Design Concepts

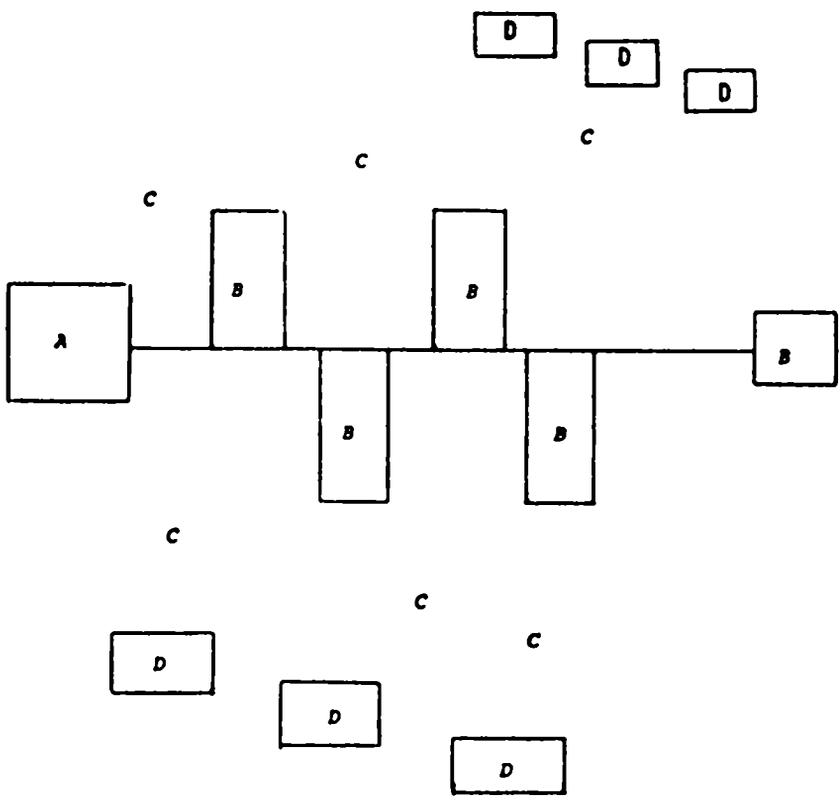
## II. Radial Design



- A )
- )
- B )
- ) for explanation, see text at circular design
- C )
- )
- D ;

Design Concepts

III. Linear design



A )  
 )  
E )  
 ) for explanation. see circular design  
C )  
 )  
D )