CASE (C)

MAHARAJA COLLEGE'S GYMNATORIUM SYSTEMS ANALYSIS COMPLETION

INTERVIEWING

Sarita did most of the interviewing. Some of the sludy facts that came out from these interviews are shown in EXHIBIT C-1 which was her interview with Feroze Ticketwallah.

Interviewee : Feroze Ticketwallah
Interviewer : Sarita Kakkar
Duties : Head Cashier, Ticket Sales
Date : Month dd, 19xx

As cashier at the ticket window, he sees that several obvious problems exist:

- Often difficult to determine from the charts how many seats are in a group (for telephonic reservations for a block of seats), customers tend to get angry when it takes a few minutes to figure out what's available. In fact more than once customers have become angry and left without purchasing any tickets.
- Encountered numerous problems with having several people selling tickets concurrently, it's tough to keep two people from selling the same seat at the same time.
- The time delays are especially difficult wilh a group wilh young kids who get problematic at having to wait while their parents get tickets.
- Getting an accurate accounting of the money collected for each event only once a day is inefficient, management needs a more timely report but there just is not staff to do it.
- If they could only have a picture on a screen of the layout of the center with a seating chart for a given event which all of the cashiers could see simultaneously. It would make it a lot easier to give the customers tickets for good seats as fast as they want them.
- Returning tickets create a real problem because you have to run around to all of the cardboard charts and correct the blocked out seats.
- Ticket takers are frustrated from being bullied around and yelled at by angry customers, impatient management and nosy accountants who need the results of what they do faster, faster, faster.....

EXHIBIT C-I Sarita's Interview Notes

QUESTIONNAIRE

A questionnaire for clients of gymnatorium was sent out to a random sample of users. Sarita wanted to determine the nature of complaints and gather additional study facts to design the system better. EXHIBIT C-II illustrates this questionnaire.

MAHARAJA COLLEGE GYMNATORIUM
SCHEDULING AND TICKETING QUESTIONNAIRE

Dear Client :

As you know, we have enjoyed major expansion in the MCG recently. To serve you better, we need your help by answering the following questions.

1. You have been able to buy tickets without having to wait
   Suongly Disagree 1 2 3 4 5 6 7 8 9 10 Strongly Agree

2. You learn of coming programs in time to plan to attend
   Suongly Disagree 1 2 3 4 5 6 7 8 9 1 0 Strongly Agree

3. You always get your assigned seat
   Strongly Disagree 1 2 3 4 5 6 7 8 9 1 0 Strongly Agree

4. You can reserve seats easily
   Strongly Disagree 1 2 3 4 5 6 7 8 9 10 Strongly Agree

5. When you enter the center for a particular event, your ticket is checked and verified properly
   Strongly Disagree 1 2 3 4 5 6 7 8 9 10 Strongly Agree

6. You are directed to your seat efficiently and without hassle
   Strongly Disagree 1 2 3 4 5 6 7 8 9 10 Strongly Agree

Comments:

EXHIBIT C-II : Clients Questionnaire

GATHERING AND ANALYZING ADDITIONAL STUDY FACTS

One of Anil's first tasks was to determine how the information flowed, or at least how it was supposed to flow in the present system. This general flow is represented in Figure C-1.

After some further analysis, Anil prepared the HIPO visual table of contents (VTOC), illustrated in EXHIBIT C-III. Anil also included a seating chart and physical layout of the event center which is shown in Figure C-2. An organisation chart for the gymnatorium did not exist, so Anil sketched the one illustrated in Figure C-3.

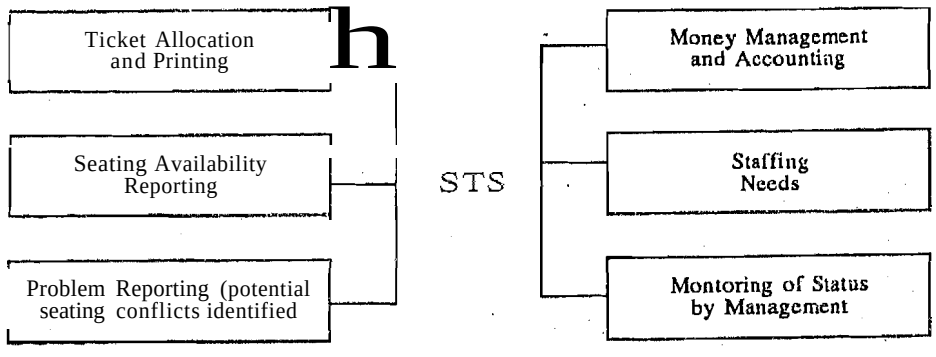

Fig. C-1 : Flow of Information in System

DETERMINING RELATIONSHIPS IN THE TICKETING FUNCTION

Anil and Sarita spent a great deal of time trying to determine and put together relationships in the total ticketing process. After a great deal of frustration and false starts, they finally

came to the realisation that tickets and ticketing was essentially an inventory control and marketing system. Once this assumption was made, they developed two entity=relationship (ER) diagrams that reflect this concept. EXHIBIT C-IV illustrates an ER diagram that models a ticket transaction from a selling viewpoint. EXHIBIT C-V demonstrates an ER diagram from an accounting and control viewpoint.

PREPARING THE SYSTMES ANALYSIS COMPLETION REPORT

Sarita conducted most sf the interviews and handled the questionnaire. Anil performed the data processing and flow analysis. Both combined their study facts and after several meetings. hammered out the Systems Analysis Completion Report.

ASSIGNMENT

Assume the role of Sarita and Anil, and based on the narrative, figures and EXHIBITS, write a crisp "Systems Analysis Completion Report".

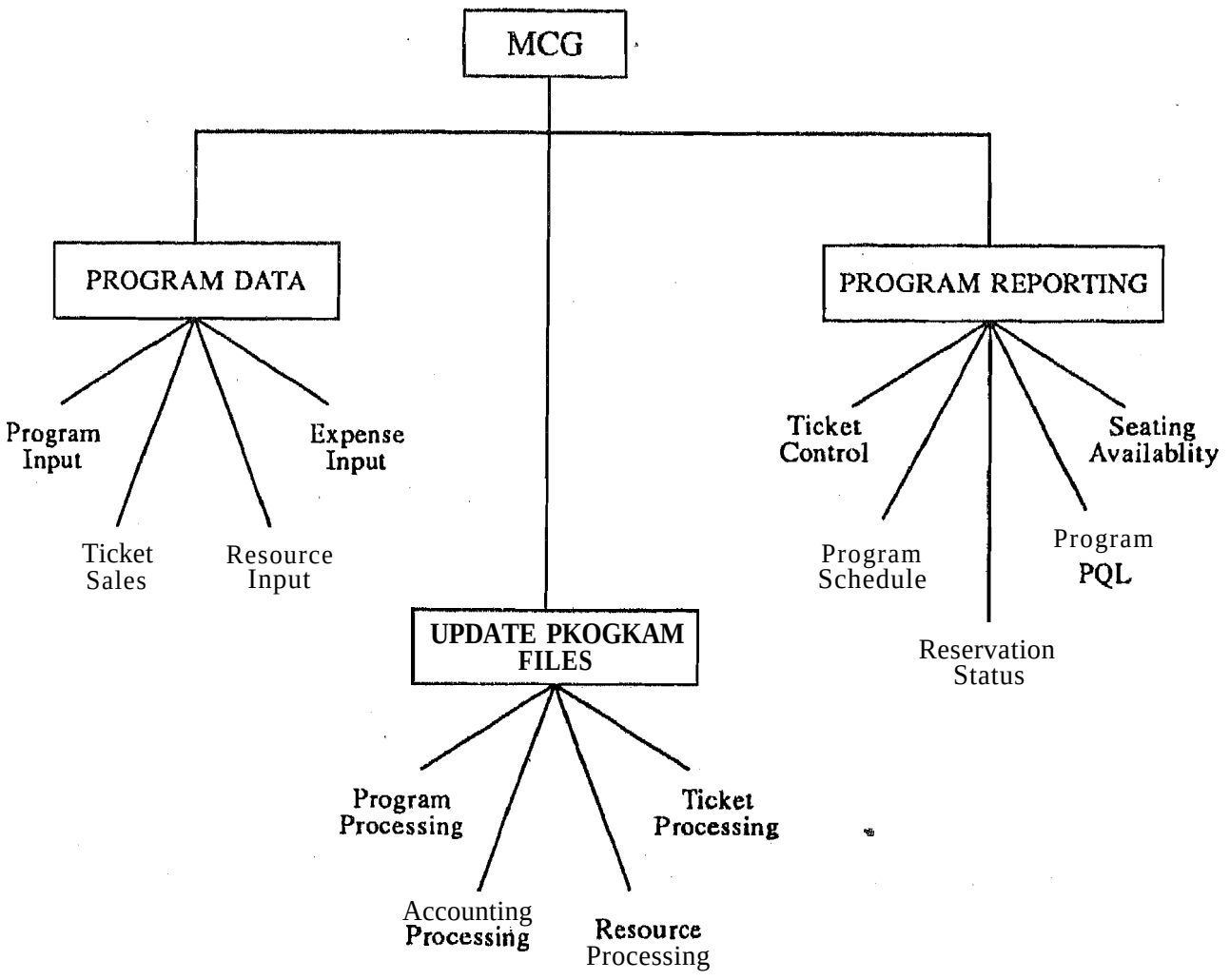

EXHIBIT C-III : HIPO VISUAL TABLE OF CONTENT

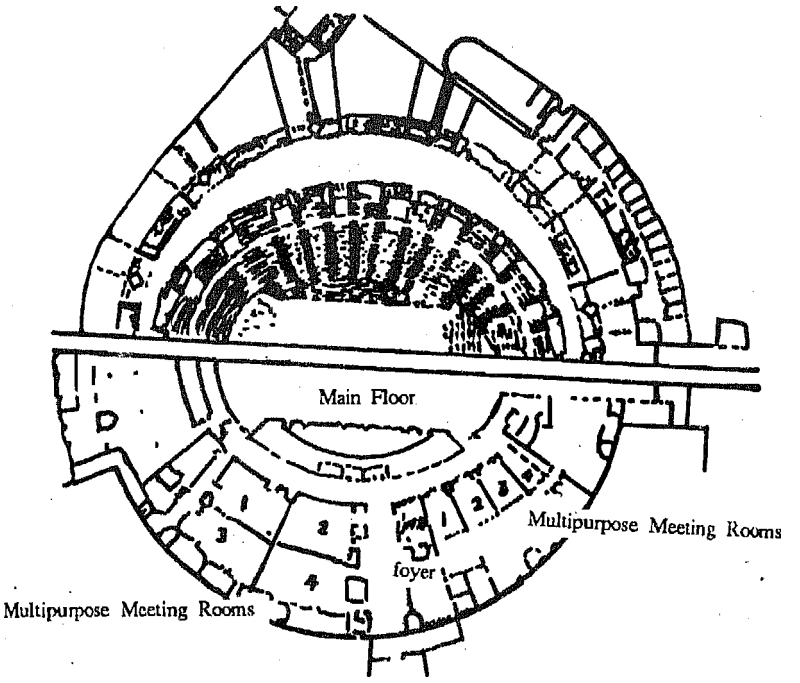

Figure **C-2:** Gymnatorium Seating Chart and Physical Layout.

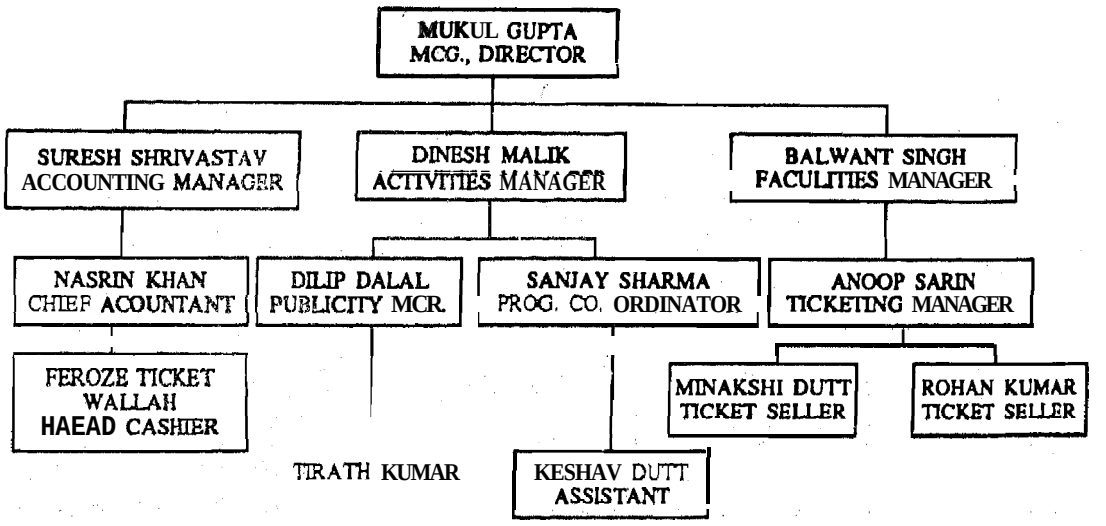

Figure C-3 Organisation chart for MCG .

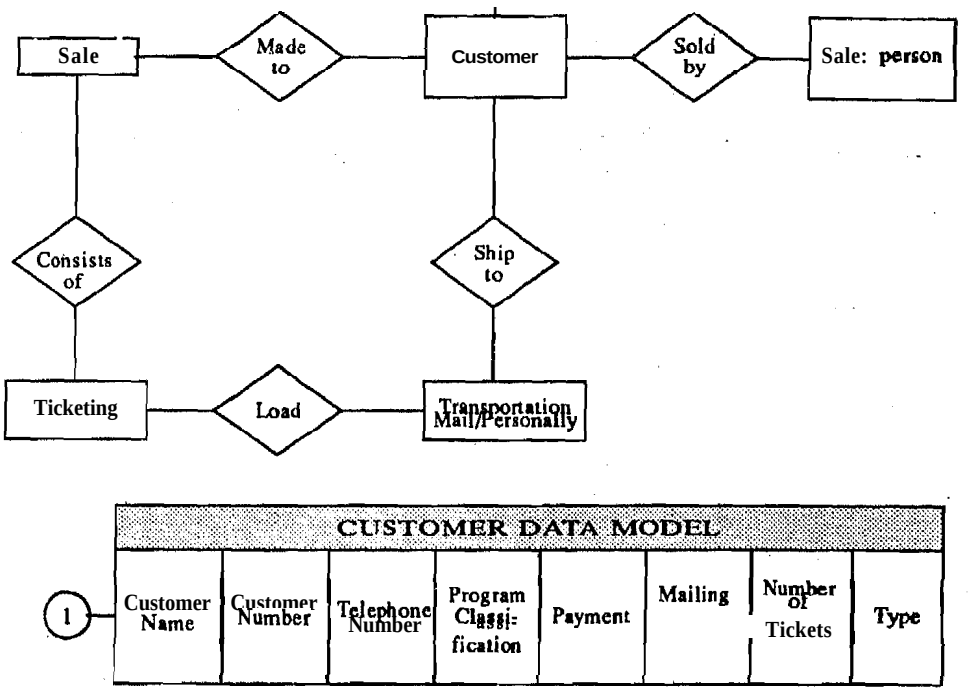

EXHIBIT C-IV : An ER diagram that models a ticket transaction from a selling viewpoint.

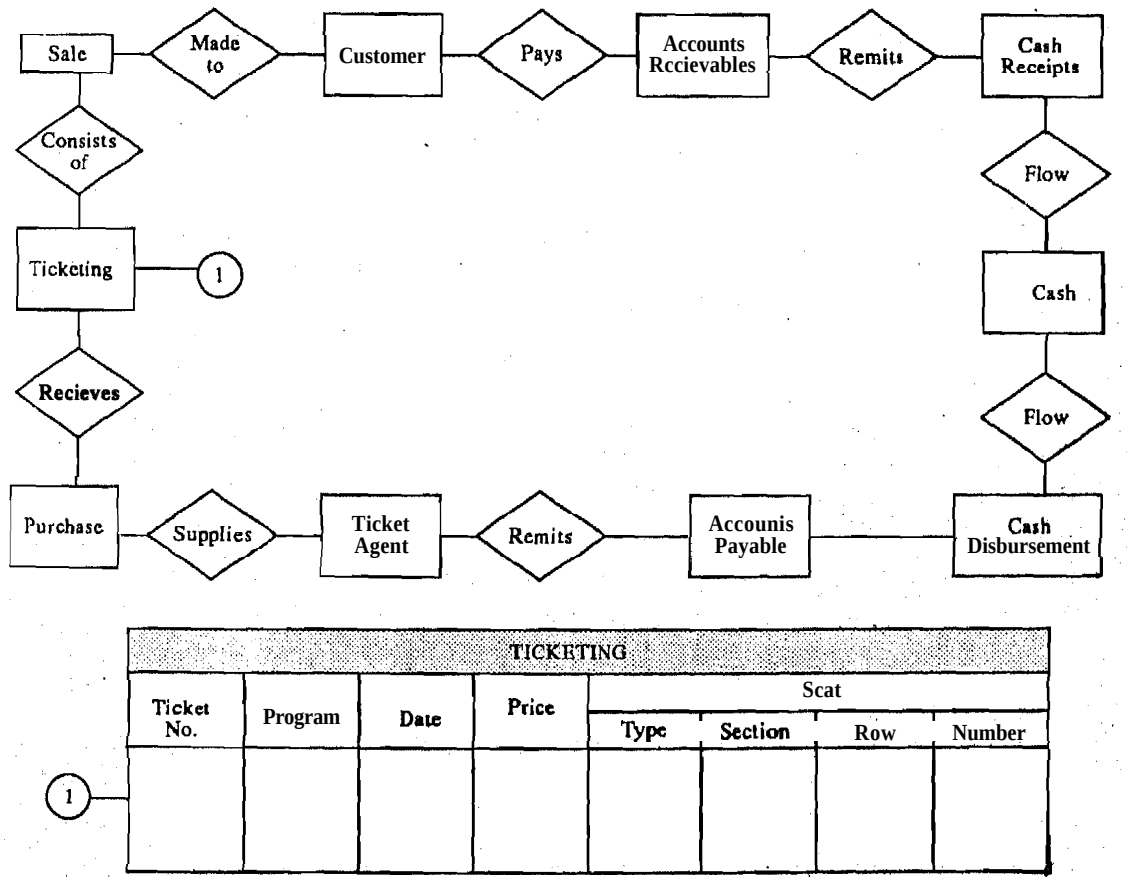

EXHIBIT C-V : An ER diagram that models a ticketing transaction from an accounting and control viewpoint.

SOLUTION TO ASSIGNMENT FOR MCG CASE (C)

SYSTEMS **ANALYSIS COMPLETION REPORT**

Month dd, 19xx

To : All Division Heads
From : Sarita Kakkar, Chief Systems Analyst
Subject : Scheduling and Ticketing System (STS)
Copies : Mukul Gupta, Gymnatorium Director and Neera Tiwari, EDP Manager

Reasons and Scope

The systems analysis was conducted to determine the feasibility and directions of STS. This report contains the findings of the systems analysis.

Major Problem Identified

Several major problems routinely experienced by the gymnatorium personnel:

1. Lack of coordination between divisions.
2. Lack of information on the status of resources.
3. Lack of information on scheduling required resources.
4. Lack of sales and expense status information for events.
5. Poor internal control of cash and tickets.

Specific Problems Identified

Consider some specific examples of how these problems have affected the ability of the gymnatorium personnel to meet their commitments:

1. The activities office is unable to communicate in a timely fashion the special accommodations required for special program such as boxing, concerts, and conventions. For example, for concerts and conventions, more communication is required because they are often not informed of special requirements such as room set-ups or planning for an associated exhibition until much too late to plan properly for and notify the relevant divisions of the extra needs for the program. On the other hand, inter-college basketball games require little coordination and the current level of communication is still adequate.

2. The current system of booking of programs has failed on several occasions, resulting in double bookings of programs. The lack of a central system for tracking the status of negotiation has led to different representatives of the gymnatorium promising and booking two conflicting types of programs in the same time period, which were extremely difficult to conduct.

3. The activities office is often unable to determine the status of specific resources available at the gymnatorium for a certain date. The result is the inability to meet commitments to promoters of programs and casual staff on a timely basis because casual staff was not scheduled early enough.

4. The inefficiencies relating to scheduling and the underestimating of the resources available in the gymnatorium have led to a policy of allowing slack-time between events to maintain quality of service. By computerizing we will be able to increase the number of events and schedule them more closely together. This will allow us to increase the usage of gymnatorium from the current 30 percent rate.

5. The activities office is not able to determine the status of ticket sales to date on a timely and cost-effective basis. This information is required by the staff at the scheduling office to determine whether to cancel a program before the contracted date.

6. The ticket office is unable to control ticket sales between the sales staff in the ticket office. Control can only be attained by cutting staff or centralising the information. Reducing staff is not feasible considering the volume of ticket sales. The only alternative is centralization of information.

7. The reconciliation of cash is time consuming. We never know what we should have in receipts because ticket dispensing is not controlled.

8. Poor control of ticket sales for assigned seating has resulted in the same seat being sold twice or more. Concurrently, some seats remain empty. This situation contributes to lost revenue and unhappy clientale.

Statement of All User Requirement

During the interviews and from other research we identified the following specific requirements:

1. Timely and efficient communication of program requirements to all divisions.

2. Efficient and accurate production and distribution of tickets.

3. Timely information on'the status of tickets sales and expenses incurred for each program

4. A system to ensure proper internal control of ticket sales and cash within the ticket office

5. A simple and efficient system to reconcile cash.

6. A system to manage credit card sales.

Statement of Critical Assumptions

All possible future constraints cannot be determined in the systems analysis phase. Future development is based on several critical assumptions.

1. After a period of parallel conversion from the current system the old system will be eliminated and the only system to be used will be the one developed as a result of this proposed project.

2. The final system developed will require that personnel be trained and the funding and support for the training will be committed.

3. The hardware and software required can be installed No physical limitations of facilities will preclude implementation.

Resources Required

If the commitment to systems development is made, the gymnatorium must identify additional resources that do not currently exist or recommit staff time from current commitments. These resource requirements include:

1. The development phase will require additional personnel to form a development team. We anticipate the need for two system designers. They should have experience in systems design and programming experience in one language.

2. If the development is done in-house, acquisition of hardware and software as specified in the systems design is required. If programs are acquired from an outside vendor, a similar acquisition is anticipated to support the product obtained. At this time it is anticipated that two personal computers with word processing and program development software will be required.

3. The system design phase will be require 1000 person-hours to complete at a cast of a proximately Rs. 50,000,

4. Management support is a key to success.

Recommendations

The discussions with division heads and other personnel indicate that the centralisation of information would enable the organisation to function more efficiently. It was universally felt that a computerised system that linked all the divisions together would improve coordination by improving communication through the use of centrally accessible specialized reports.

The systems development should be started as soon as possible. Problems experienced with the current information system have caused lost revenues and additional nonmonetary costs. A Systems Design Proposal Report will be produced in a few weeks that will provide feasible information systems design alternatives.

CASE (D)

MAHARAJA COLLEGE'S GYMNATORIUM (MCG) SYSTEM DESIGN PROPOSAL

EMERGENCE OF DESIGN

To get a better perspective on the STS project, Sarita and Anil prepared a functional diagram, depicted in Figure D-1. This diagram, combined with a thorough review of their study facts gathered during systems analysis phase (Ref: MCG Cases (B) & (C)) began to merge together helping to form building blocks, giving rise to several design issues.

DESIGN ISSUES

Sarita had told Anil on several occasions, "The right hand doesn't know what the left hand is doing, at the gymnatorium. Moreover, they need a system that will integrate their activities. Otherwise they will be doomed".

"Yes, I know", Anil responed, "They're trying but they don't know how to go about it".

"Also, we've got to think about users' level of expertise. Most of them will be unskilled. Therefore the user/system interface must be carefully planned."

"They better start getting serious" said Anil. "The municipality is building its own general purpose auditorium, so competition is bound to increase".

"They're getting some information now, if you want to call it that but it's not usable. It's too late, so it is no way better than zero information. The timeliness for information seems to me to be a vital consideration in design. And for them timely information is key to be able to compete, "said Sarita.

I'm sure we'll be able to meet the systems requirements. The idea of building system's bridge to other businesses for ticket sales is a good one, though I believe it's a little premature at this stage of the design, "said Anil.

"Yes, First things first, "Sarita agreed, "but we can direct out designs towards enabling this kind of bridging if they want to go that way in the future.

"If they approve the kind of systems design I have in mind, data processing requirements will be very easy, "said Anil.

"You know, I've been thinking, "said Sarita, "the gymnatorium is just like any other service. Sometimes, I tend to look at systems differently if they are in an academic setting; but in reality all systems can pretty much be described in the flow of people, materials and data The gymnatorium is organised along divisional lines and has decentralised management because Gupta lets them run their own areas."