



ITU Seminar

Bangkok, Thailand , 11-15 November 2002

Session 5.2

Features, Inputs/outputs for most frequent tools: application of **Excel** **PLANITU**

Application of **Excel**

- entering and storing of network data
(coordinates, traffic, equipment costs)
- sorting of network data
- calculating of basic formulas (demand forecasting) and simple methods (exchange locations)
- presenting of tables and charts

Excel

Example for the location problem from Session 4.2 “Switching/Routing and Transmission planning”:

0	0	81	326	81	0	0	0	<i>R1</i>
0	0	122	407	163	0	0	0	<i>R2</i>
0	0	81	366	204	0	0	0	<i>R3</i>
156	40	323	284	122	0	0	0	<i>R4</i>
391	236	323	323	326	41	43	43	<i>R5</i>
234	235	194	150	132	190	222	188	<i>R6</i>
38	208	326	310	240	283	317	317	<i>R7</i>

Excel

Example for the location problem from Session 4.2 “Switching/Routing and Transmission planning”:

$$R1 = 81 + 326 + 81 = 488$$

$$S1 = R1 = 488$$

$$R2 = 122 + 407 + 163 = 692$$

$$S2 = S1 + R2 = 1180$$

$$R3 = 81 + 366 + 204 = 651$$

$$S3 = S2 + R3 = 1183$$

$$R4 = 156 + 40 + 323 + 284 + 122 = 925$$

$$S4 = S3 + R4 = 2756$$

$$R5 = 391 + 236 + 323 + 323 + 326 + 41 + 43 + 43 = 1726$$

$$S5 = S4 + R5 = 4482$$

$$R6 = 234 + 235 + 194 + 150 + 132 + 190 + 222 + 188 = 1545$$

$$S6 = S5 + R6 = 6027$$

$$R7 = 38 + 208 + 326 + 310 + 240 + 283 + 317 + 317 = 2611$$

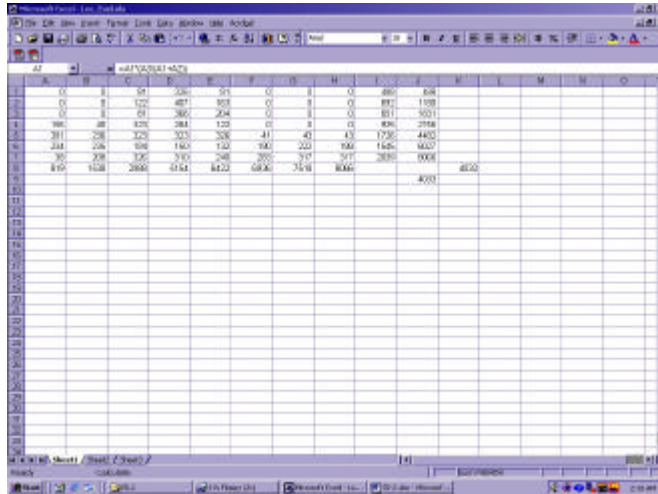
$$S7 = S6 + R7 = 8638$$

$$S_{TOT} = S7$$

$$S_Y = S_{TOT} / 2 = 8638 / 2 = 4319$$

Excel

Result for the location problem from Session 4.2
“Switching/Routing and Transmission planning”:

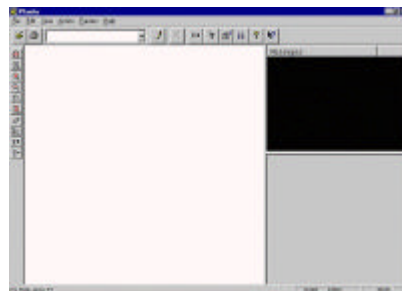


The screenshot shows a Microsoft Excel spreadsheet with a grid of data. The data is organized into columns and rows, with some cells containing numerical values and others containing text or formulas. The spreadsheet is titled 'Microsoft Excel - Book1.xls' and the active cell is A1. The data appears to be a table with multiple columns and rows, possibly representing a network planning problem.

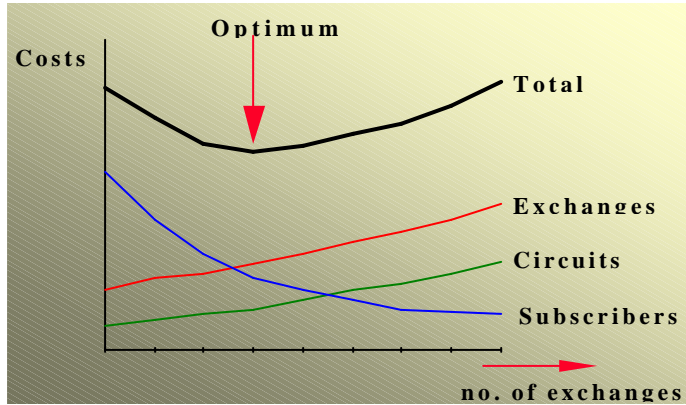
PLANITU

PLANITU is a tool for optimisation and dimensioning of telecom networks, based on an integrated interactive approach for finding minimum cost solutions for:

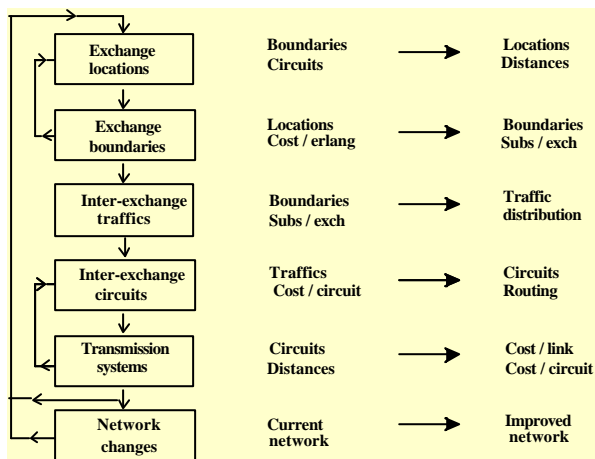
- *location and boundaries of exchanges*
- *selection of switching and transmission equipment*
- *circuit quantities, traffic routing, switching hierarchy*
- *choice of transmission paths.*



PLANITU



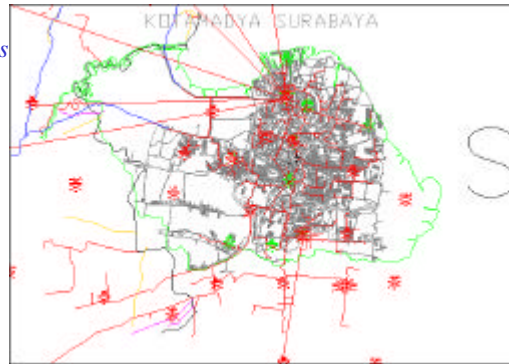
PLANITU



PLANITU

Local Networks

- *Exchange locations*
- *Exchange boundaries*
- *RSU locations & boundaries*
- *Inter-exchange network*
- *Exchange hierarchy*
- *Transmission systems*



PLANITU

Rural Networks

- *Exchange locations & boundaries*
- *Exchange hierarchy*
- *Inter-exchange network*
- *Transmission systems*



PLANITU

National & International Networks

- *Traffic routing*
- *Exchange hierarchy*
- *Inter-exchange network*
- *Transmission systems*



New Features in Planitu 3.0

Access network optimization

1. Dial-up Internet subscriber planning
2. Broadband access planning
3. Planning of cabinet areas

New Features in Planitu 3.0

Backbone network optimization

1. Dual homing (load sharing)
2. Design of nonhierarchical circuit-switched networks
3. Optimization of the fixed part of mobile (GSM) networks
4. Optimization of Ring/ Mesh SDH/ SONET transport networks
5. Design of ATM, IP MPLS, WDM networks using equivalent bandwidth paradigm.

New Features in Planitu 3.0

Updated data handling and Planitu user interface

1. Contemporary "flat" look and feel with redesigned toolbars.
2. Integrated running cost chart for immediate inspection.
3. Export Planitu graphics into industry standard CAD formats
4. Results saveing into Access database for post processing
5. New Planitu help containing complete Planitu manual
6. Set of demo networks for the new Planitu functionality
7. New click and go installation procedure on one CD

New Features in Planitu 3.0

Planitu 3.0 Manual



Planitu 3.0 Network planning system manual
© ITU Geneva

March 2002

PLANITU

APPLICATION:

- ✓ PSTN circuit-switched (TDM) networks
- ❑ Data (packet) networks – very limited
- ❑ Evolution to NGN - limited
- ✓ Training tool for network planning