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Capacity leveling

Introduction

In CAT model, you will find different alternatives to evaluate the capacity load and make some decisions avoiding overloads or scheduling the production in a better way.

For instance, in standard SOP, a rough-cut planning profile can be used to carry out a first capacity evaluation. In the flexible planning it was shown how a planning type can be created to take into account capacity requirements coming from different products using the same resource.

In this manual, we will refer to a detailed capacity evaluation, which is carried out on the basis of planned/process orders.

These orders are generated by the master recipes. The resources and operation times included in a recipe are the key dates in the capacity planning.

Firstly, a capacity evaluation for a given resource will be presented, and we will see how the planned (process) orders are impacting on a given resource.

Then we will make the capacity leveling for the resource, which is a process of dispatching the planned orders, i.e., allocating them to the resource at a given date/time.

Capacity evaluation
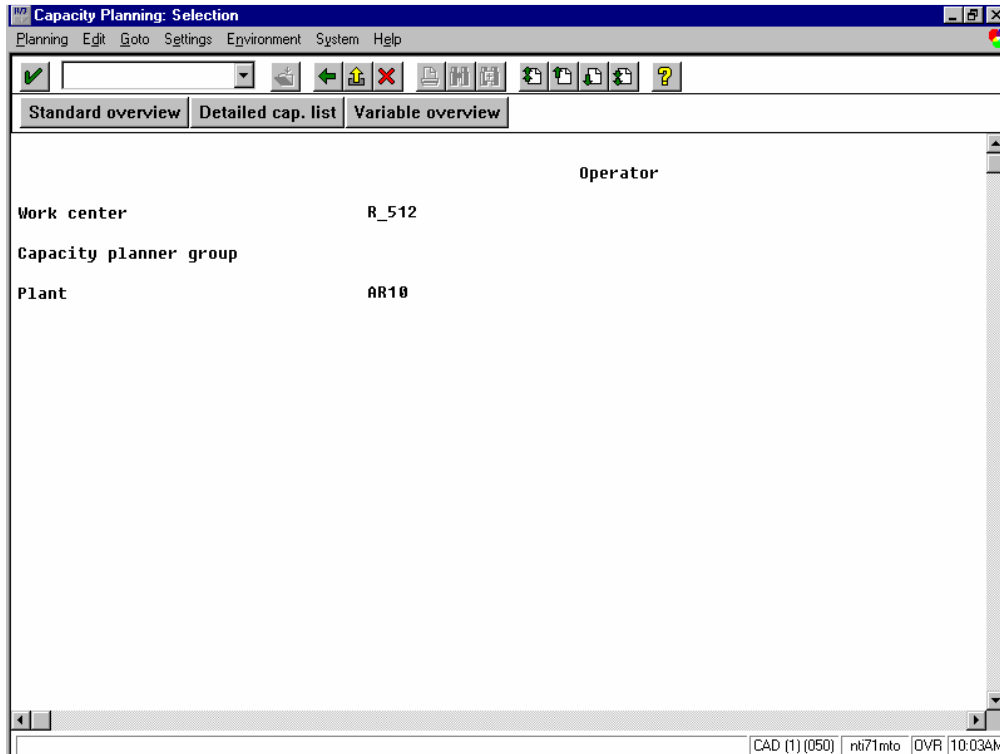
From the menu go ➢ logistic ➢ production-process ➢ process planning ➢ evaluation ➢ resource view ➢ load.

We can take a look at the resource R_512 for example.

Fill in the fields:

Work center   Resource that you want to evaluate the usage

Plant

Press ![checkmark] and you will see an overview of the capacity usage as shown on the next page.

HELPFUL HINTS:

Transaction CM01 – capacity planning selection

Capacity evaluation

This view shows the requirements in hours per week.

You have the following information available:
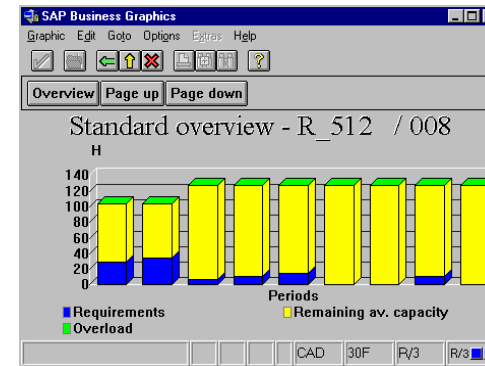
Requirements

AvailCap   Available capacity

CapLoad   Capacity load (% of usage)

RemAvailCap   Remaining available capacity

If click on the system will display a chart as follows:

You can see details of a week for example. Select week 01.1998 and click on **Cap. details/period** .
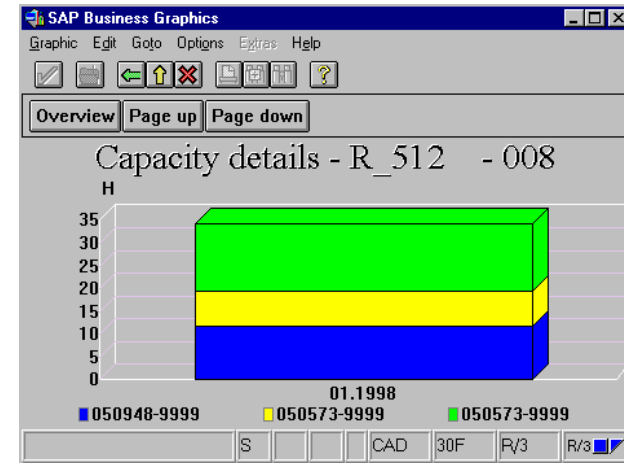
HELPFUL HINTS:

Capacity evaluation

You can see a chart as well. Click on [icon] :

You can customize your report. Let's say you want to see first the material and material short text instead of the pegged requirements. Click on **Choose fields...** and the dialog box shown on the next page will appear.

HELPFUL HINTS:

Capacity evaluation

Capacity Planning: Standard Overview: Details						_ 8 X

Planning Edit Goto Settings Environment System Help

Chosen Fields: Sequence

Pegged requirements
Pegged rqmts qty
Operation
Material
Material short text
Total capacity reqmt
Earl. start date exe
Earl. start time exe
Late. fin. date exec
Late. fin. time exec

✔ Copy Selection list...

Plant
Work center
Capacity catego

Week	Pe				qmts	Earl.
Total					50	
01.1998	20				00 H	02.01
01.1998	20				00 H	02.01
01.1998	20				00 H	02.01
01.1998	20				00 H	02.01
01.1998	20				00 H	02.01
01.1998	20				00 H	02.01
01.1998	20				00 H	02.01
01.1998	20				50 H	02.01
01.1998	20				00 H	03.01
01.1998	20				00 H	02.01

CAD (1) (050)   nti71mto   OVR   10:59AM
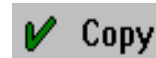
You will use four buttons basically on this dialog box:

To select a field (to be deleted or moved, for example)

To allocate the field into a new position

To delete a field from the sequence

✔ Copy To update the sequence as you have chosen

So, first select material by clicking on [icon]. Then click on the field Pegged requirements and click on [icon]. Do the same with material short text. Now press **✔ Copy** and you have a more customized report.
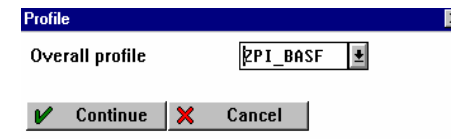
The next step is to check the schedule according to the capacity.

HELPFUL HINTS:

Capacity leveling
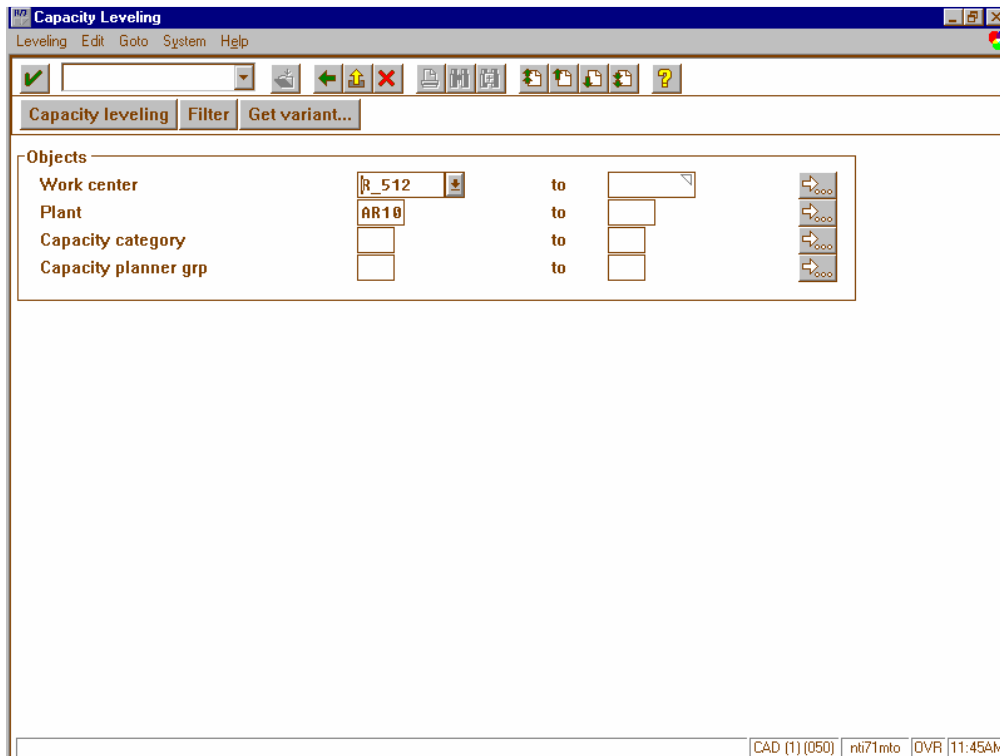
From the menu go ➢ logistic ➢ production-process ➢ process planning ➢ capacity leveling ➢ variable ➢ overall profile. A dialog box appears asking for a capacity profile (In CAT model was developed the ZPI_BASF):

Click on **✔ Continue** and you will be taken to the screen shown at the left.

You must specify the work center and the plant. Then, click on **✔** and you will see a chart like the one below:
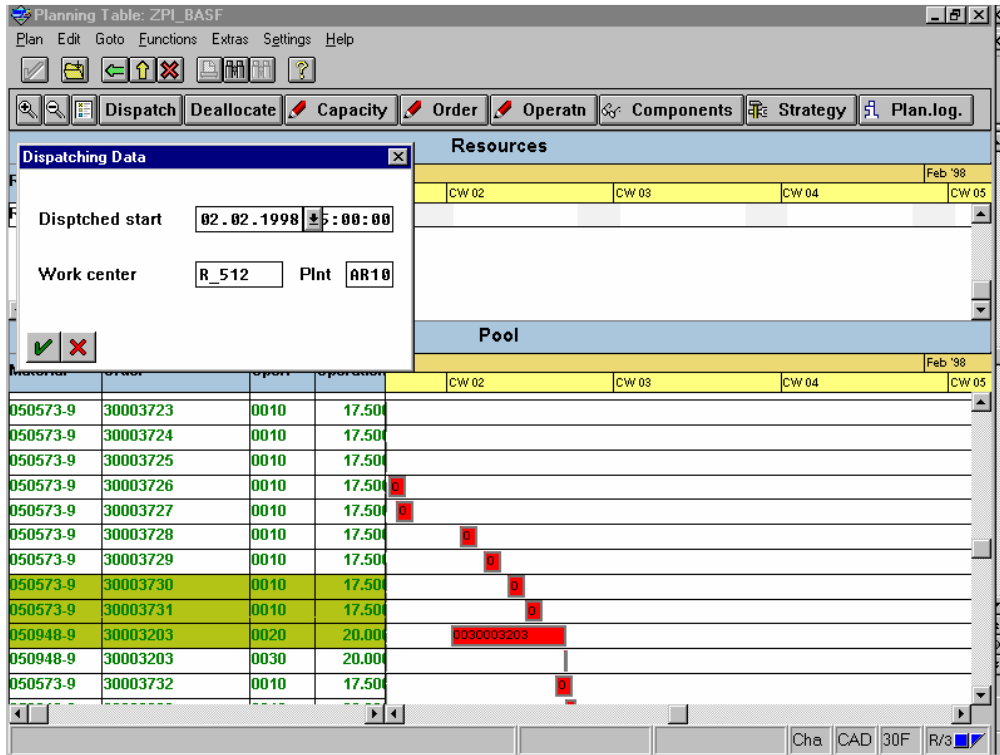

Here you can see planned, created and released planned orders. Select the planned orders created (click on one of them and then keeping the key <SHIFT> pressed click on the other
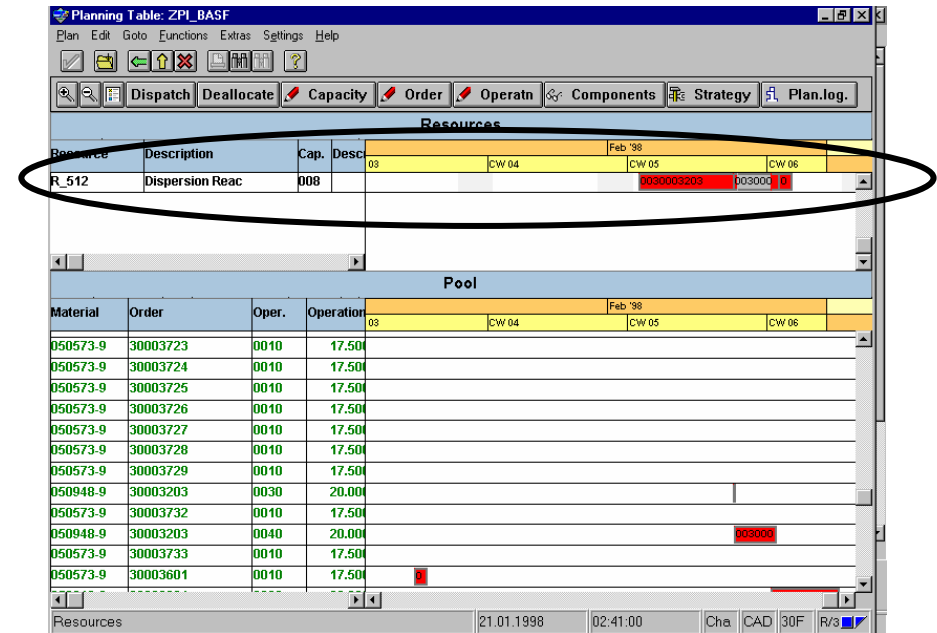
HELPFUL HINTS:

Transaction CM29 – Capacity leveling

one) and click on **Dispatch** to plan a schedule for them. You see the window shown on the next page asking for dates to be considered in the scheduling.

You enter the date to start the dispatch and click on ✔. The dispatch will be carried out and the result will be displayed as follows:

You can see details of the orders and the materials. If you are interested in a particular order click twice on it and the order will appear showing details like the quantities to be produced.

Capacity leveling
<u>HELPFUL HINTS:</u>

Capacity leveling

HELPFUL HINTS:

The capacity leveling is based on an overall profile. The overall profile of CAT model is named ZPI_BASF (customizing view – item 1). This profile is a combination of a set of parameters for the system so as to define needs of selection, filtering and grouping data for capacity leveling.

In order to do the scheduling you must select a strategy. CAT model does the scheduling based on the strategy profile ZAP_T001 (customizing view – item 2). Click on the button **Strategy**.
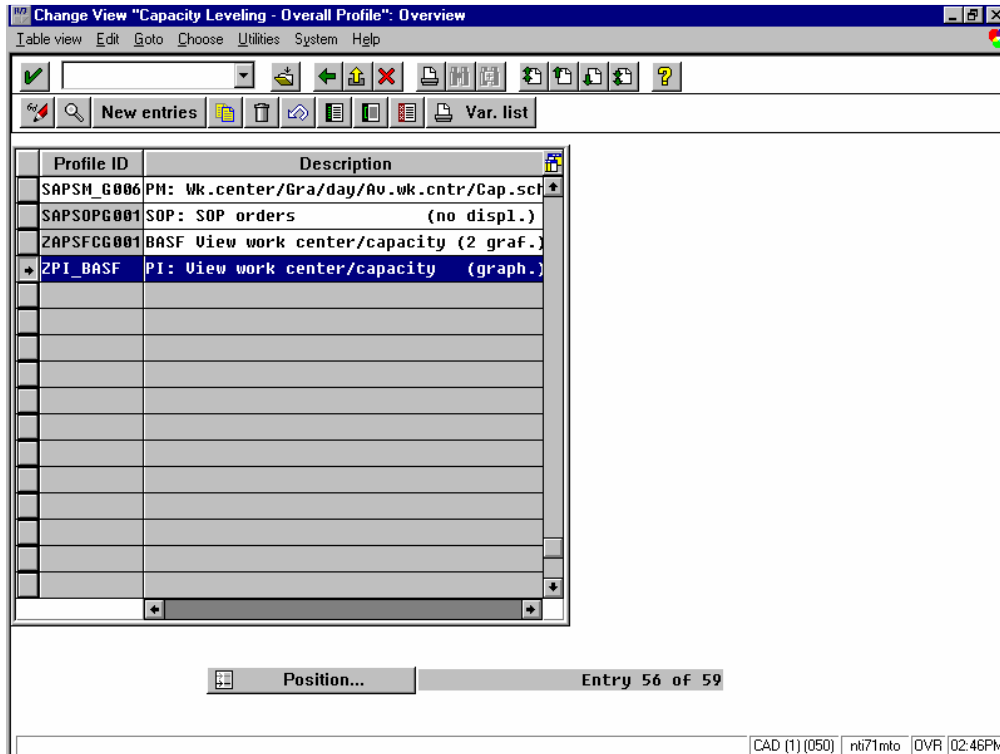

The choice of this strategy is very important to define the dispatch sequence.

There is a discussion of the following profiles in the customizing view:

# Capacity leveling – Customizing view

1. Capacity leveling

The main purpose of the capacity leveling is to dispatch operations in order to optimize the resources usage.

So as to achieve this target CAT model developed a system to dispatch the operations taking into account setup considerations. So setup classes were created and during the capacity leveling the SAP tries to join operations with the same class of setup. This should minimize the time wasted in setups due to product changes.

The first step is to choose an overall profile for the capacity leveling. The CAT model profile is ZPI_BASF. Click on 🔍 and you will be taken to a screen with the detail shown below:
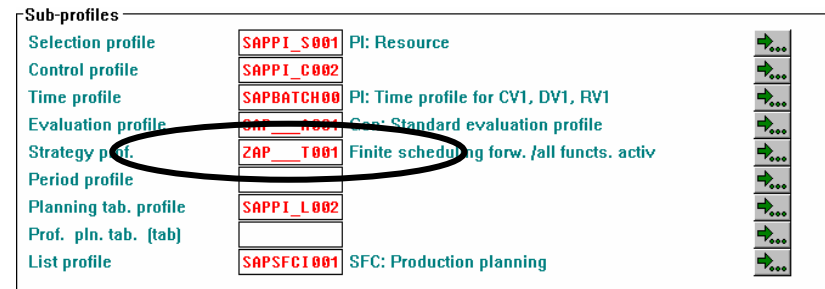

There are keys to define structures to select, to filter, to group data, to control and to evaluate the capacity leveling for example. Now let's give a special attention to the strategy profile. The strategy profile is where you are going to specify the dispatch sequence. This is shown on the next screen.
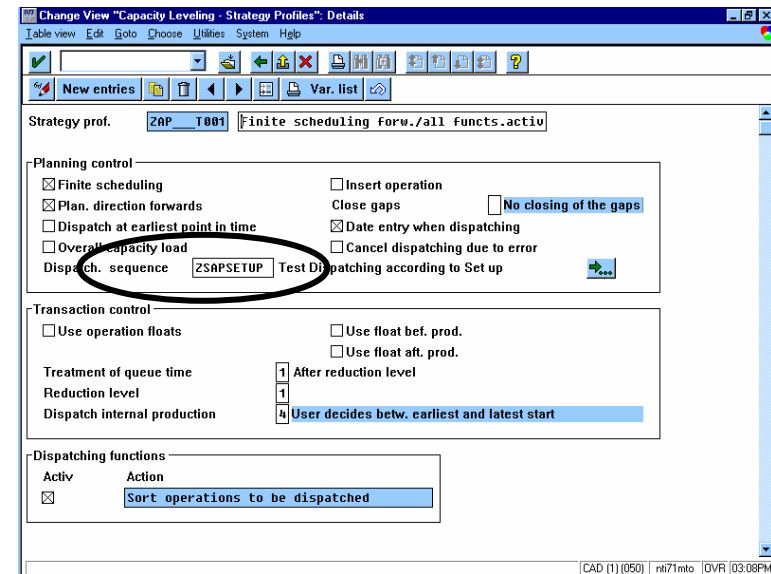
HELPFUL HINTS:

Transaction OPD0 – change view capacity leveling overall profile: overview

2. Capacity leveling – strategy profile
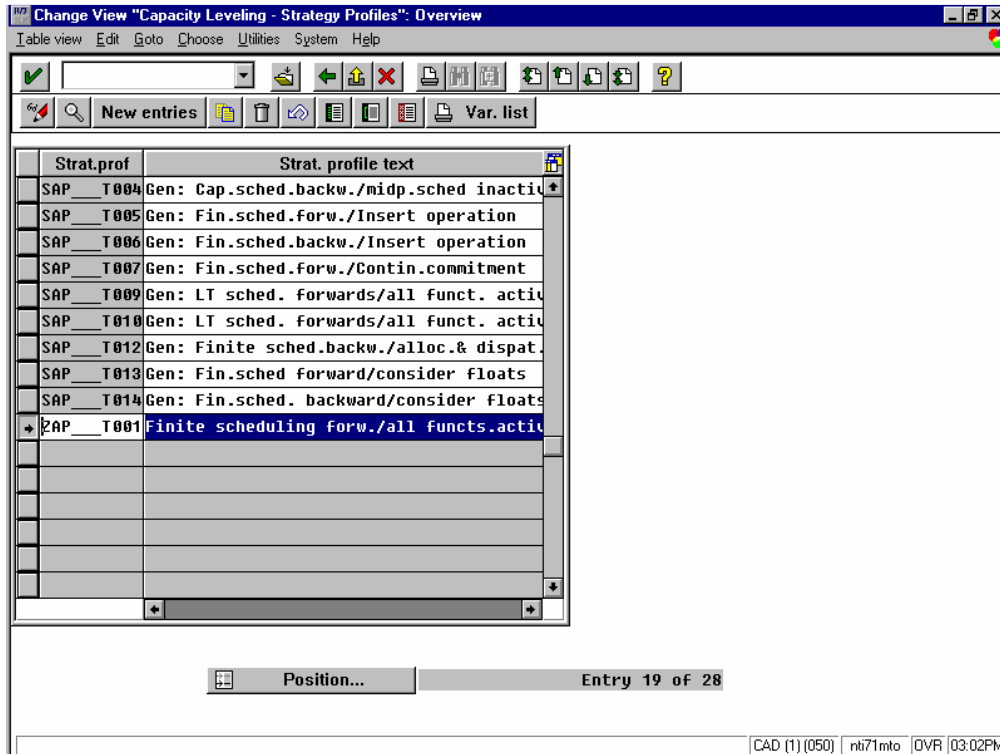
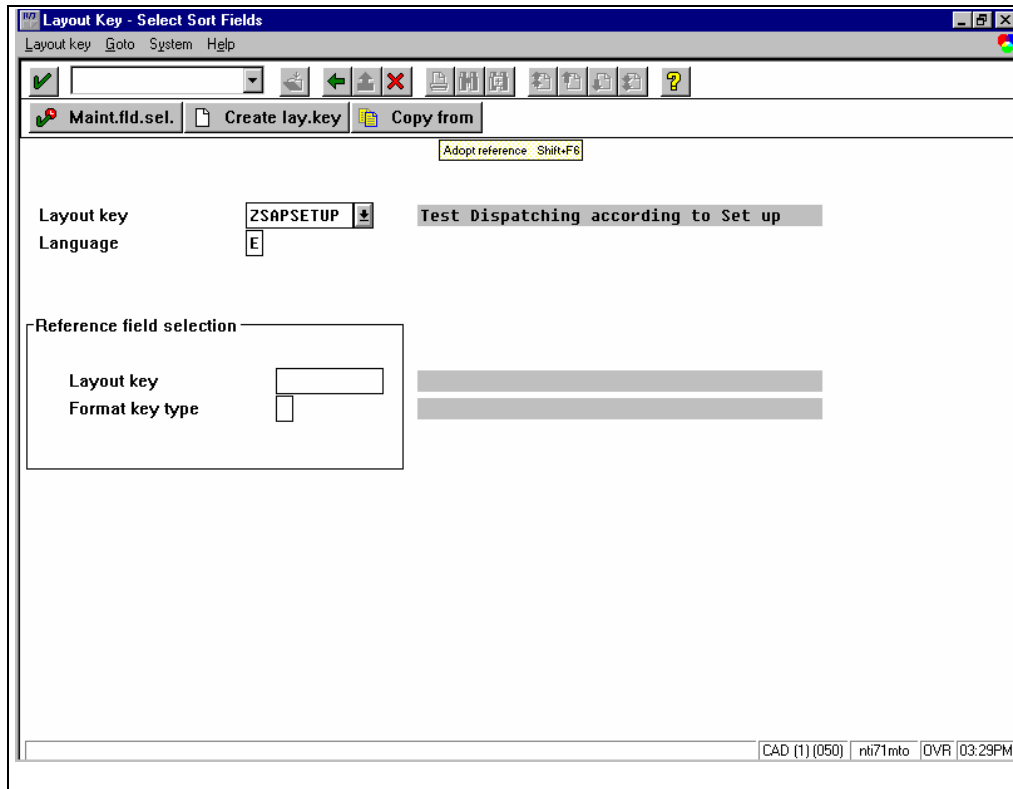CAT model uses ZAP_T001 as strategy profile. Click on 🔍 and you will see the screen below:

The field dispatch sequence is the one that specifies the dispatch sequence. The sequence ZSAPSETUP is shown on the next page.
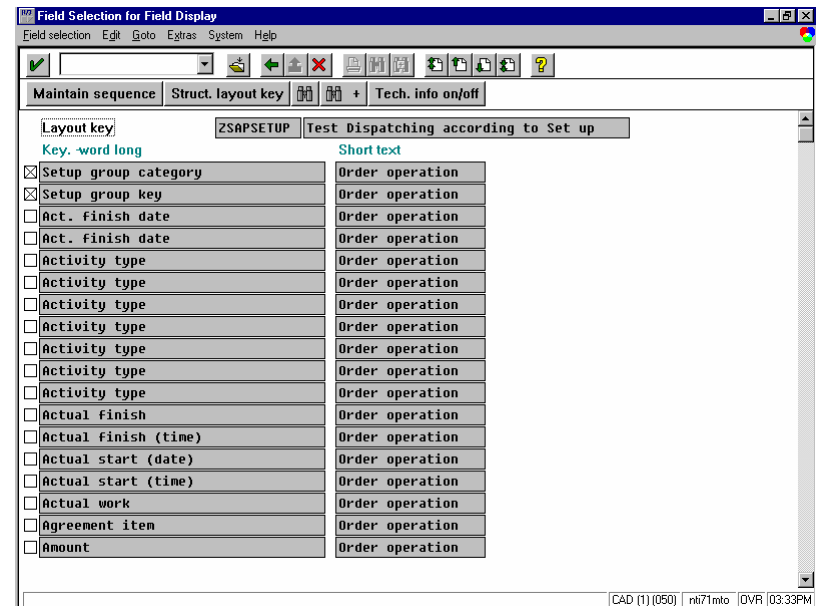
HELPFUL HINTS:

Transaction OPDB – change view capacity leveling – strategy profile: overview

3. Capacity leveling – setup category

The setup sequence is defined based on a layout. So select the layout (ZSAPSETUP) and click on **Maint.fld.sel.** and you see a screen as follows:

Now you specify the factors to be considered in the schedule sequence.

In this case, only setup group category and setup group keys (see manual: Master recipe) are considered for dispatching. In order to define which field has the highest priority, click on **Maintain sequence** and then select the desired field.

HELPFUL HINTS:

Transaction CY39 – change view "Layout key": overview