



RESOURCES SCHEDULING IN HARBOUR AREA

Context

In many cases, the scheduling of staff and ships placing needs a considerable effort from the planners. These one are in charge of the normal functioning of the different involved resources.

In addition to that, they have to :

- Assure the staff of the best possible work conditions in a fair way and at the cheaper cost for the administration,
- Plan the ships placing in order to optimise the costs due to the loading and unloading of ships.

The tasks that the planners have to cope with are very complex and involve the respect of many constraints as :

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- *The constraints bound by the staff management :*
 - Dockers collective bargaining,
 - Dockers affinities,
 - Dockers preferences,
 - Dockers rest and vacation days,
 - *The constraints bound by the material management :*
 - Distance to respect between the ships in accordance with the type of ship and the type of loading,
 - Gantries position in accordance with the type of ship,
 - ...
 - *The constraints bound by the hazard :*
 - Ships delays,
 - Frequent ships breakdowns,
 - Mistakes about the ship freight (number of containers, of cars, etc...)

This hazard involves some frequent modifications concerning the forecasted scheduling. One of the planners worries is to be informed in real time and make this scheduling upgraded.



The product

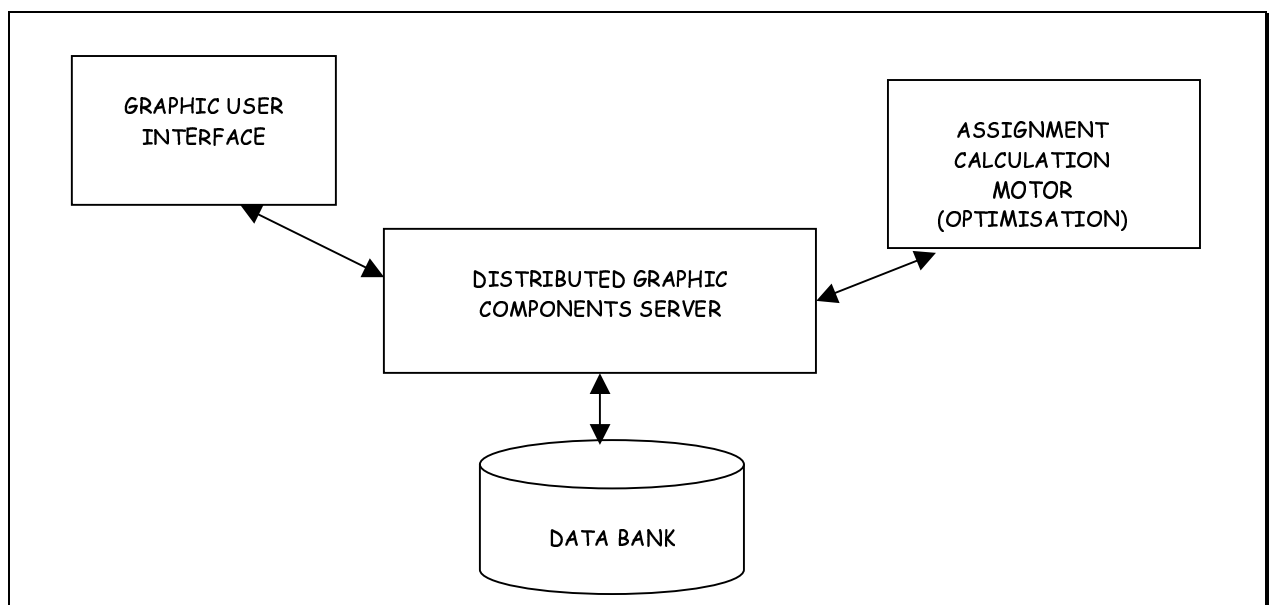
This product looks like a global solution about staff scheduling and ships management on the wharves.

This solution allows more accurately :

- To plan the ships placing on the wharves as well as the availability of material resources necessary to the unloading,
- To assign manually or automatically the staff to different works,
- To organise the ships loading and unloading.

The different units making up this application are :

- A convivial user interface which clearly represents (up to 15 days) a large quantity of information bound to the staff and ships placing scheduling.
- A graphic components server which centralizes any information and distributes it to different clients. Indeed any modification which is made by an user reacts automatically on real time on all the other clients stations.
- Assignment calculation unit placed on the server which allows to calculate (or calculate again) the scheduling in accordance with all the constraints expressed by the scheduling.





Staff scheduling

This scheduling consists in :

- Assigning the staff to different works (ports of call, yards, ...),
- Assigning rest days to the staff.
- ...

The user is able to make the scheduling manually (through the interface) or automatically through the assignment calculation motor.

This one takes into account any constraint bound to the Dockers collective bargaining and to the work organisation (respect of preferences, teams, etc...).

In order to improve the calculation flexibility, the user is able to modify the priorities on the assignment principles. So the planners can take into account the dairy specificities in a solution searching. For example, in an low activity period, the user can enforce to the calculation to assign preferably some rest days to the Dockers.

To sum up : this application manages in an optimal way the staff and material resources in accordance with the real ships arrival in the harbour.