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Base Station Configuration in GSM OSS

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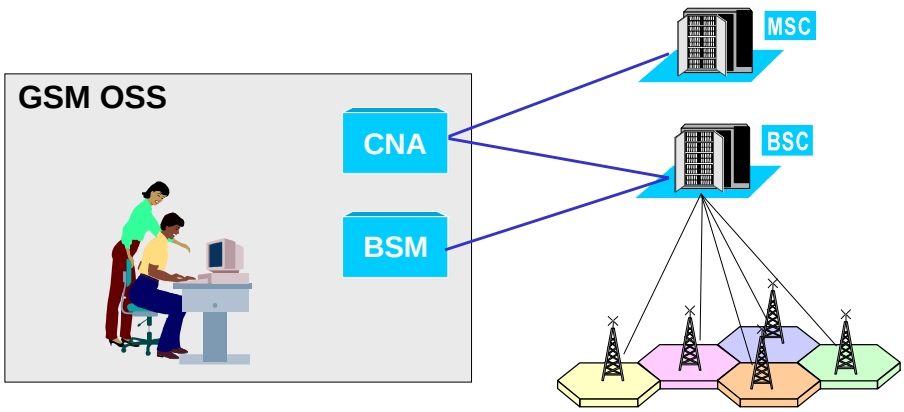
Cell and RBS Configuration Overview



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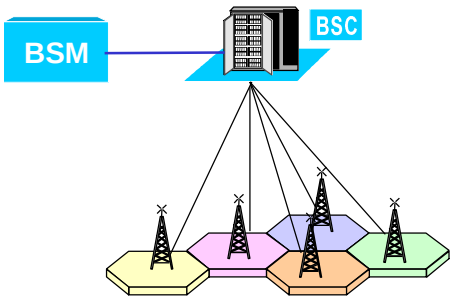
RBS configuration using BSM



- Network Expansion:
  - RBS configuration
- Network Optimization :
  - RBS re-parenting
  - Increase RBS capacity

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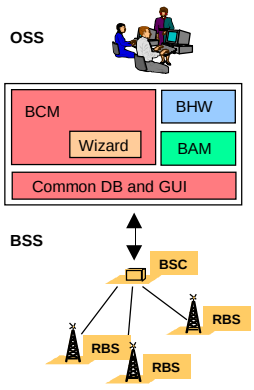
BSM - Base Station Management



BCM - BTS Configuration Management
- BSS Network Overview
- RBS Configuration Support

BCM Planning Wizard
- Support for Consistent Network Configuration (Optional)

BHW - BTS Hardware Management
- Hardware Register (Optional)

BAM - BTS Alarm Management
- Fault Handling (Optional)

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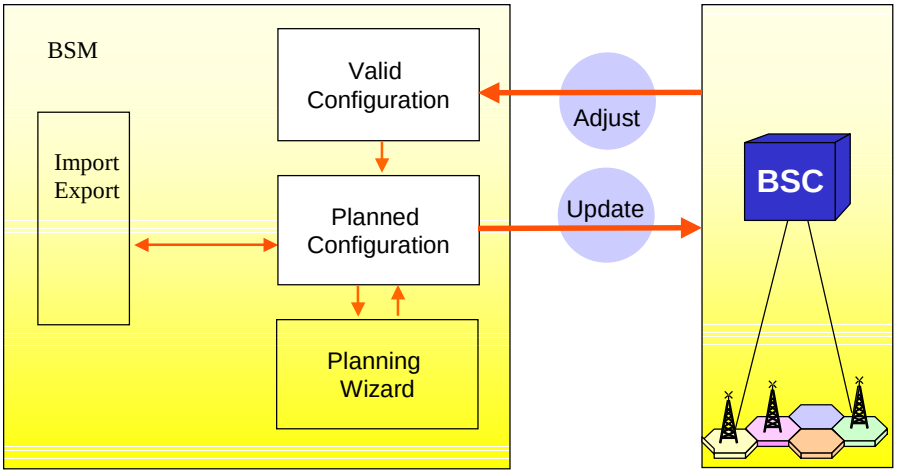
BSM workflow



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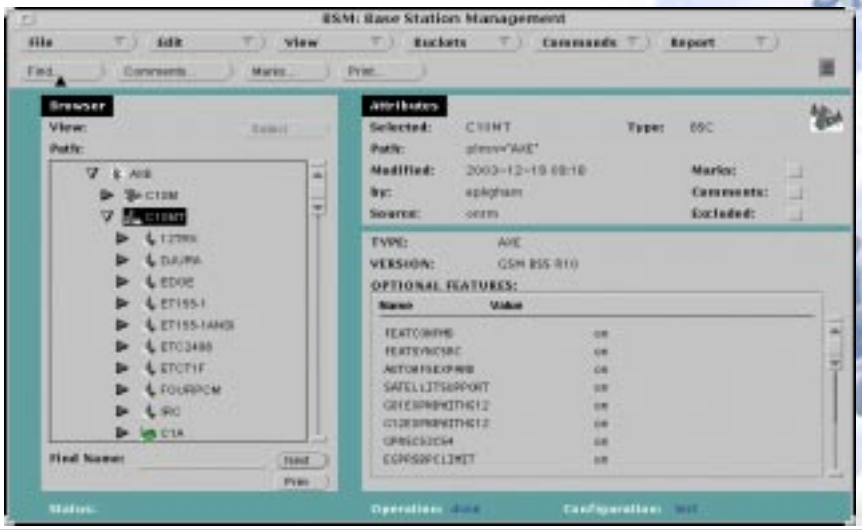
BSM Base Window



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Why using BSM Planning Wizard?

- Network expansion/change - frequent O&M work
- Direct interface with the Network, risk for introducing errors
- Difficult to keep track of all dependencies between parameters
- Difficult to find inconsistencies and handle conflicts

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Why using BSM Planning Wizard?

- Low-level parameter settings require deep knowledge
- Many parameters are set by default values
- Multiple use of BSC resources

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Definitions – The Planning Wizard

- A framework for execution of *work orders*. Assuming that a work order is executed from a wizard using a consistent configuration as input, the wizard guarantees that the configuration is consistent after the work order has finished.

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Definitions – Work Order

- A (configuration planning) task performed as an atomic operation, in terms of changes to an existing configuration, executed normally by one single user within a very limited amount of time. Each work order is divided into one or more *steps* each supporting one well-defined part of the task.

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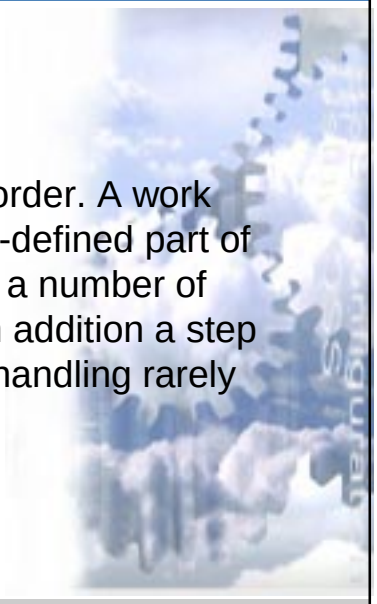
Definitions – Step

- The smallest part of a work order. A work order step supports one well-defined part of the work order, consisting of a number of *planning (or UI) attributes*. In addition a step might have a *fine-tune step* handling rarely changed attributes



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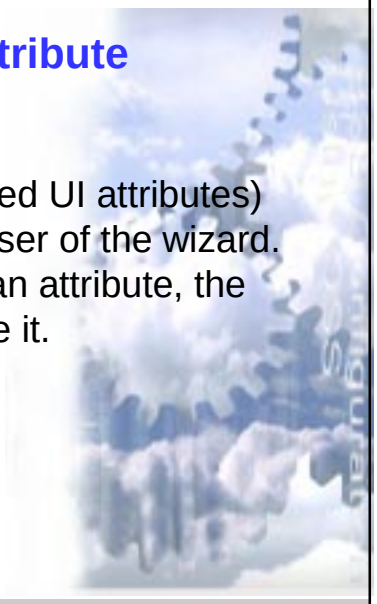
Definitions – Planning Attribute

- Planning attributes (also called UI attributes) are attributes visible to the user of the wizard. Depending on the status of an attribute, the user might be able to change it.



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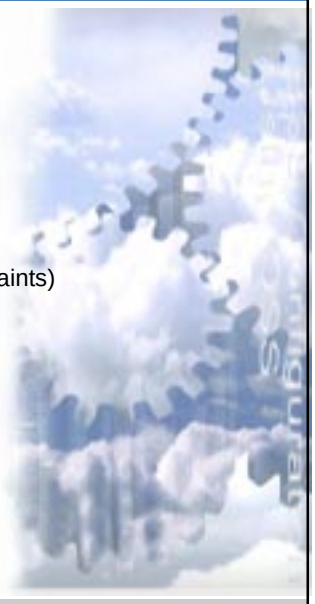
The Wizard Characteristics

- Effectiveness
  - Task oriented (work order)
- Efficiency
  - Decrease amount of work (default values, constraints)
  - Decrease error frequency
- Continuous Consistency Control
  - Consistency among attributes
  - Conflict handling
  - Default values
  - Consistent sets of choices



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The Wizard Characteristics

- Planning Attribute Priority
  - Pre-set (read only)
  - User set
  - Automatically set
- A final configuration proposal
- Template support

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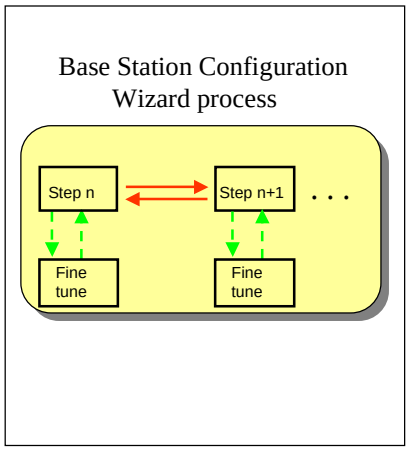
The Wizard Process



- The planning process is separated into several logical steps
- Step by step guidance through the planning process is offered
- Dependencies between configuration parameters are tracked

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Start the Planning Wizard

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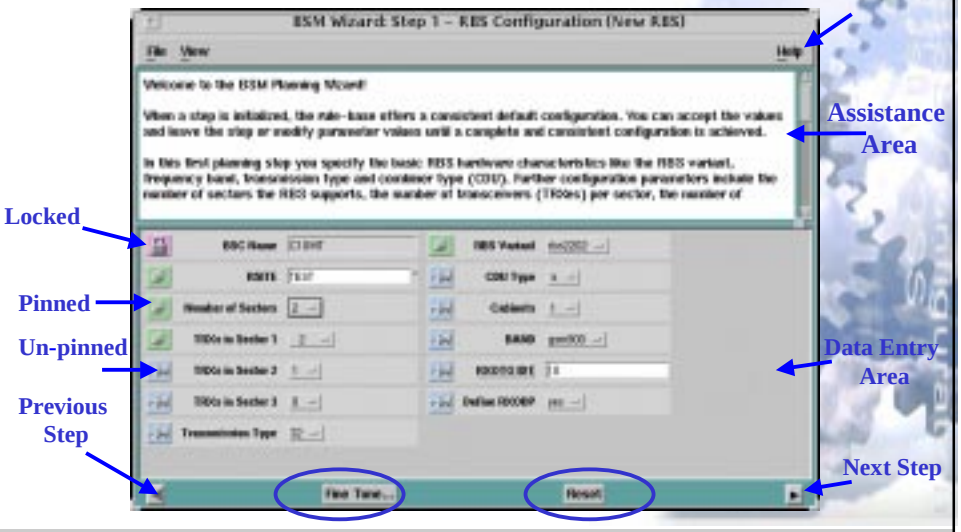
First Step



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Conflict Handling

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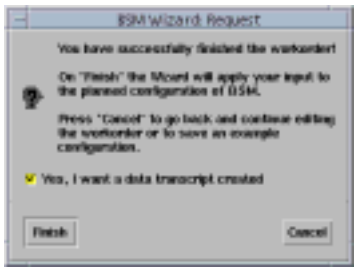
Finish work order and Create Data Transcript



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Planning process