CARMEN SYSTEMS
RESOURCES IN BALANCE

Descartes - The Final Frontier!!

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BRITISH AIRWAYS

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What does Descartes do?

- What does it do?
- Works on the principal of
  - Generating options to solve disruption scenario
  - Evaluating these options as to how good they are to a particular resource holder
  - Solves all types of disruption no matter whether it is smaller or of a massive nature
- Elements of Descartes are essentially;
  - Dedicated systems
  - Disruption Manager (managing messaging and communications)
  - Integration of the dedicated systems

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The Objectives of Descartes

To Bring The Passenger Into The Forefront Of The Operation In A Pro-Active Fashion, By Empowering Operations Controllers to Take Operational Decisions Based Upon The Best Passenger Option

To build a decision support tool that will allow better integrated decisions to be taken within the Operational environment

But….The money for development so far, has not been spent on the GUI

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The Scenario….

‘*Flight BA303 is delayed due to a mouse on board!!…This is a manual communication… the controllers enter this into the* ***Disruption Manager***

- The tool used to link the dedicated systems & passes messages back & forth using XML
- Gives the overall view of disruption across the resource areas
- Can be fed with manual descriptions of disruption or feed from FICO or another automated feed

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'From the Disruption Manager the message is passed through to ..'

Dedicated Aircraft Recovery

- Generates and evaluates disruption options
- RAVE integration will happen
- Monetary value given which can easily be changed (but other ways of evaluation can be implemented)
- Parameters with regards to optimal number of ac swaps etc are set, and can be changed to suit the user
- Many options are generated very quickly - more than an AC controller would usually consider - hence giving more choice to 'feed out' to other areas to look at

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Dedicated Aircraft Recovery

- Rule set currently used;
  - Minimum Turn Times
  - Changeable Activity Types
  - Outstation / Route Constraints
  - Night Curfews
  - Fixed Links
  - Maintenance
  - Plan Quality
  - Standby Usage
  - Slots

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'What impact does this have on our passengers on the BA303 and other subsequent delays? A message is sent through to the…'

Dedicated Passenger Recovery

- Furthest advanced in terms of development
- Aircraft solution options from OPS control
- Optimal rebooking scenario for each option
- Passenger costs presented for each option
- Rebooking instructions for each passenger

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Objectives of DPR

- All objectives are specified in RAVE
- Hard costs & Soft costs considered
- Total delay is specified in Passenger Value Delay Minutes
- Upgrades & Downgrades
- Passenger Compensation
- Hotel accommodation & meal vouchers

- Two costs are presented for each option;
  - Passenger Value Delay Minutes
  - The Cost in Monetary Terms
  - BUT….This solution could be equated to an overall value (I.e. 0 - 5)

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'The DAR has generated and evaluated options, the DPR has evaluated options, we now have an ....

INTEGRATED SOLUTION'

- Integrated Sequential recovery solutions
- Will eventually look at all the resource areas to include;
  - Cabin Crew
  - Flight Crew
  - Other potential resource areas such as cargo / catering etc
- The Operations Controllers taking part in the workshop said

  "This system provides speedy suggestions to often complex changes in the operating schedule"

  "There will obviously be real benefit in the integrated solution"

  "At last the passenger gets a voice, rather than the aircraft taking precedence"