Airline Retail Engine Architecture

Admin GUI

Product Box

AdminDB
- Products
- Services
- Rich Media
- Users
- ...

NDC API 17.2

Shopping- & Booking-Engine
- Offer Creation
- Taxes, Fees
- Payment
- Order Creation
- ONE Order

PSS Integration
- Fares
- Available
- PNR
- TKT
- EMD

Offer Store

Order Store
- Full-fledged offer- & order-management, stepwise decommissioning of legacy PSS and PSS-based (fare- and RBD-based) processes enabled
- Fully integrates with PSS where required (PNR, e-ticket, EMD, DCS sync, ...) and any other system (loyalty, CRM, ...)
- Pure NDC API (no translation to proprietary formats); easy access control
- Designed to interact with PSS-based or standalone pricing and availability systems, or even with a full dynamic pricing engine
- NDC API should be used for all channels, incl. airline.com, to establish single-point-of-truth
- Functionality purely based on NDC Order
- ONE Order messages already implemented to communicate with revenue accounting system
- Basic analytics provided; all shopping, offer and order data are owned by airline and can be made accessible in various, state-of-the-art ways
Airline Retail Engine Capabilities

Order Servicing Capabilities

Based on NDC 17.2
• cancel entire order
• cancel individual order item
• re-shop ancillaries (add, remove)

Itinerary change incl. refund is currently in implementation.

→ Pure NDC – no ATPCO rule-set used for changes/rebook

Rich Content Capabilities

• All rich content (text, image files, external URLs) located with each product or service for better usability
• Currently in carrier default language – multi-language currently in specification phase
• For more complex rich content management, external providers such as Routehappy can be integrated (>25 languages supported)
Fully Integrated NDC & ONE Order Pilot (as implemented)
ONE Order Pilot – Lessons Learned

It is possible!

• ONE Order messages fit-for-purpose
  • Some fields should be optional
  • More payment details desired
    ➔ RA could eventually do settlement

• Sale of a flight is possible in pure NDC & ONE Order scenario – Order is sole master record

• PNR-less setup works
  • Inventory can be adjusted without PNRs
  • PNR-full & PNR-less passengers can co-exist in RA system
  • PNR-full & PNR-less passengers can co-exist in DCS and can be checked-in and boarded (tested)
  • Orders are updated with DCS data (PRL / PFS)

DCS needs enhancements

• Orders cannot be sent to DCS via Web Service
  ➔ Updates were sent using PNL / ADL messages via Telex

• Selling functions in the DCS cannot be used
  ➔ NDC itself allows super-short term sale

➔ DCS must eventually support ONE Order
Payment Setup

NDC API 17.2

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PSS Integration

PCI Proxy

w/out card data

with card data

tokenization of card data

authorisation settlement

deo-tokenization of card data

Datatrans AG

Acquirer

Payment Network

Card Issuer

aws

PSS

Sched
Fares
Avail.
PNR
TKT
EMD

Datatrans AG

PCI Proxy

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deo-tokenization of card data