TwinAisleFeeders

Paradigms in Perspective
Deterring the 'Hagbard Viking' vs 'RASM/CASM' Controversy in Bottomline Strategy

In controversy to proselytes of 'RASM/CASM' as the better strategy in online CRS/Web bottomline decision-making, the within paper aims to unveil 'RASM/CASM' a partisan hoax (biased pro-bulk aircraft), inappropriate or directly misleading to airline retail strategists piloting online pricing.

As opposed to 'RASM/CASM', TwinAisleFeeders professes Hagbard, the Horrible Viking's dogm :

(Hägar, by Dik Browne - courtesy KFS)
Says Hägar, the Horrible Wiking : "Son, life needn't be **EITHER-OR** ... let it be **BOTH-AND** !"

Let's start from the beginning (dixit Wikipedia) :
RASM = **R**evenue per available seat-mile   CASM = **C**ost per available seat-mile

The general idea – when applying RASM/CASM for real-time pricing decisionmaking in on-line (CRS) product management – is that '**R**' and '**C**' in these parameters, being actual numbers taken directly out of Accountancy for **Revenue** and **Costs**, guarantee delivery of a perfect, dependable instant picture of the Trip Accounts for a given TODD (time-of-day departure) for a given trip AAA-BBB.

Retail Psychologists, the Golden Boys of modern airline Management, are in desperate need to be perfectly informed in real-time of the correct, dependable answer to this question : as from what minimum price - HERE AND NOW - will the sale on the market of the next ticket for a given flight contribute an operating profit ? These people are the strategists who pilot the airline's CRS Pricing Unit. If incorrectly informed one way, in spite of a rush influx of confirmation clicks they may steer a trip account into red numbers unknowingly (underpricing the tickets), whilst likewise if incorrectly informed the other way, they may again steer the same trip accounts into red numbers, for lack of purchase clicks (if eg the bottomline offer is overpriced vs the market out there on the web).

CRS regulatory guidelines say (a) you must quote a price; (b) this price must be accessible to all.

The whole dialectics about RASM Bottomline Strategy is about how best not to miss the famous 'Second Click' : if your own base offer is dissuasive, ie if your own base offer is clicked directly into the Paper Bin with the second click of the prospector's mouse, Hello chance dilution !, Good-Bye market share ! ... and remember : the Job of Retail Psychologists is to **make Money for the Airline** !

Now the general picture is set. Let's consider the 'Hagbard Wiking' vs 'RASM/CASM' controversy, rooted in that TwinAisleFeeders ventures a set of new – hence controversial – ASM ansatzen :

for A321 (3+3) : $ASM/24h = [198 + 4\ ULD \times 1/\phi\ ] \times 7\ DL$ (resp. x 9 DS)
for H21QR : $ASM/24h = [179 + 6\ ULD \times 1/\phi\ ] \times 8\ DL$ (resp. x 11 DS)
for eg 738 or MAX-8 : $ASM/24h = [165 + Zero] \times 7\ DL$ (resp. x 9 DS)

The above is offered as a way to play 'RASM/CASM' back right into the feet of those who in the first place nurtured the hoax : ie, the makers of bulk-loaded aircraft, sponsoring dissemination of bulk-biaised Cursus through the voice of accredited Speakers @ Bay Area, @ Harvard or elsewhere.

Let's be more specific :

In the above expressions, 'ϕ' is the conversion factor between the average freight rate (per cuft of freight volume) vs YCff (Y-class full fare ticket price); 'ULD' is the volume in cuft of the applicable Universal Loading Device – typically AKH, LD3-45, palettes ...; in addition, 'DL' = average distance in nm for route networks where 'L'ong routes prevail; and 'DS' = ditto, where 'S'hort routes prevail.

Let R/i = trip 'Revenue' for a given TODD (time-of-day-departure) for a given leg A-B; then we have :

$Revenue/24h = \Sigma\ R(A\text{-}B) = \Sigma\ \Sigma\ R/i = \Sigma\ \Sigma\ (R/s + R/f + R/ifec + R/frills + R/cil + R/col + R/xyz\ ...)$

(read R/24h = double summation of all trip revenues R/i for seats, freight, ifec, frills, checked-in luggage, carry-on luggage etc (no-shows, cancellations, ...) over all the various legs flown/24h).

By far the most important, let's specify the revenue R/s from the tickets sold, ie from the seats :

A321 (3+3) : $R/s = 198 \times AP \times CLF$ .... with 'AP' = average cash per ticket; 'CLF' = Cabin Load Factor
H21QR : $R/s = (74 \times AP\_S \times CLF\_S) + (105 \times AP\_T \times CLF\_T)$ ..... with 'S' = singles; 'T' = triples
for eg 738 or MAX-8 : $R/s = 165 \times AP \times CLF$

and for the freight revenue R/f :

style 'Crazy Uncle' (with A321) : $R/f = 4 \times ULD \times FLF \times [average\ freight\ tariff]$
style 'First Concubine' (with H21QR) : $R/f = 6 \times ULD \times 100\ \% \times [average\ freight\ tariff] \times (1 + \psi)$
with bulk-loaded aircraft such as eg 73X NG or MAX Series or H3XQR or C-Series : $R/f = ZERO$!

(here 'ψ' is a price boost upon the average freight tariff, imputable to 'expert freight coaching')

We may now recapitulate : Let RASM/24h = R/24h divided by ASM/24h; similarly, for the costs : CASM/24h = C/24h divided by ASM/24h ... where $C/24h = \Sigma\ \Sigma\ C/i = \Sigma\ \Sigma\ (Hourly + Cyclic + Fuel)$

Now we can play the ball ... what do we see ? : that normal feeder aircraft really are composed of two aircraft, a passenger aircraft on Main Deck (the cabin with the seats) plus a Freighter aircraft on Lower Deck (the available ULDs, ie those not requisitioned for CIL). The Hagbard ansatz says : why make a choice ?, let's have BOTH AIRCRAFT ! An other way is to propose that feeder aircraft are really larger than solely the Main Deck cabin. Only **bulk-loaded aircraft** reduce to its passenger cabin, because it is impractical to try carrying freight with bulk-loaded holds on lower deck : the man-power/man-hours required to unload/load bulk freight is not compatible with turn-around cost + time targets : bulkloaded freight risks impairing the economics of the whole operation !

On the other hand, if you are a feeder operator playing 'Crazy Uncle' or – better – 'First Concubine' airfreight strategy, then a new and attractive world opens ... to your Retail Psychologists ! : it so happens that in real world, scheduled line **airfreight is largely contracted forward** per professional frame contracts. We live in a world of certainty. We know the load factor ahead. We know the tariffs ahead. There is no 'Gauss' probability curve affecting these numbers. Consequently, the freight part appears very early up in time in the Revenue ansatz as a 100 % certain (Accountant's) input . This very comforting situation shall allow the Pricing Strategist, if of relevance – eg in a stressed market vs the competition – to apply revenue contribution from freight to further reduce the bottomline offer for the seats, in case such is commanded by the current market situation.

As an example only, in a market where the prevailing freight tariffs (boost ψ included) allow to set ϕ = 12.6, if we use AKH containers (with a volume of 127 cuft each) we get ULD/ϕ = 10, whereby :

for A321 (3+3) 'First Concubine' (with ψ) :   ASM/24h = [198 + 40 = 238] x 7 DL   (resp. x 9 DS)
for H21QR 'First Concubine' (with ψ) :   ASM/24h = [179[*] + 60 = 239] x 8[**] DL   (resp. x 11[**] DS)
for A321 (3+3) 'Crazy Uncle' (without ψ) :   ASM/24h = [198 + 16 = 214] x 7 DL   (resp. x 9 DS)
for bulk aircraft [3+3], eg 738 or MAX-8 :   ASM/24h = [165 + zero = 165] x 7 DL   (resp. x 9 DS)

We observe two things : (a) when leveraging ASM from freight boosts, the "effective combined capacity" of H21QR becomes directly equal to that of the A321 [3+3] in a 'First Concubine' scenario, whilst the A321 'Crazy Uncle' is beaten out of breath !; and (b) the ASM of MAX-8 is at a stand-still !

Whence immediately a potent impact upon CASM, which again – in turn – impacts upon the RASM bottomline : our Retail Psychologists are allowed to tighten the belt around their stomach another two or three holes and become really aggressive in their positioning, grabbing more market share !
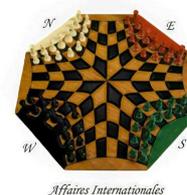

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([*])   Nota Bene : H21QR seats are in fact branded, wherefore 'Product Differentiation' comes into effective play, producing another 'virtual capacity boost' vs [3+3] a/c (A321, 738, MAX-8...) eg, if the premium vs [3+3]-prices is +7 % for the singles and +4 % for tripled seats, then the "virtual" equivalent capacity of the H21QR cabin is (74 x 1.07) + (105 x 1.04) = 188, not 179

([**])   More legs flown before curfew give better per-trip impact of 24h-cyclic night stop-over costs