

# Little Lessons From History

by *Bruce Taylor*

## CHAPTER6: The story of ALCS

### *Disclaimer*

*In this series I have tried, as best my memory serves me, to recall and correctly describe the events of my TPF world as I experienced them. My experience, my understanding, my interpretation and my memory are all fallible. Since I wrote nothing down in anything resembling a diary, I have had to try to correlate dates and events from often circumstantial evidence. My interpretation of cause and effect is a personal view. I have no intention of disputing the claims of others with respect to what really happened, or why things are the way they are, or who did what and when. In particular, if I say that a product seems similar to another in some way or came from something else, there is no implication that any intellectual property rights were violated, nor that any dubious practices were involved, nor that malice was afoot. Fortunately, neither intelligence nor knowledge nor insight are the exclusive property of any one person.*

*In addition, I worked in and was absorbed by the airline world's usage of TPF and I still live with the illusion that the airlines and their progeny, the GDS's, always were and always will be the driving force governing and ensuring TPF's continued existence. If I do inadequate justice to the contribution of other industry sectors to the survival of TPF, then please accept my apologies, but do not ask me to change my opinion.*

*Finally, I am writing this series as a private individual, not in my current capacity as Managing Director of Datalex Netherlands BV, and nothing said represents a position nor a statement nor an opinion of any part of Datalex.*

I was TPF Systems Manager at KLM from the spring of 1976 till the autumn of 1986: more than 10 years. Many things had already happened in the TPF world before I arrived on the scene. Although Eastern-based PARS, with its IPARS progeny, was by far the predominant reservations system in the travel industry, it had spawned two competitor systems. The first was Univac's (now Unisys) USAS and the second was CPARS. Exactly how or when these two came into being and which one was first, I do not remember, though it was in the (very) early 1970's. It's all lost in the mists of time. Both of these were an attempt to bring the reservations application into a standard (for those days) operating system environment, instead of this deviant, special-purpose thing called ACP then, TPF now, which consumed a whole, dedicated CPU. CPARS used the IBM mainframe DOS operating system, of which there were thousands in the world, and the reservations application bore many similarities to the IPARS base. The C of CPARS was the C of Cathay Pacific, where it was built by a number of ex-BA employees who had worked on the IPARS project in London. USAS, being on a completely different hardware architecture, was developed from scratch, though a lot of the concepts and acronyms were "borrowed" from PARS. USAS, being the only survivor alongside TPF, will feature in a later chapter.

In the beginning, all IBM TPF expertise was in the US, but

by the mid-1970's a considerable body of IBM people in Europe and elsewhere had acquired it as a result of working on customer implementations of the IPARS system. To support these customers, IBM set up the IASC (International Airline Support Centre) in London and collected a number of these people together. These people in London were not allowed to do any TPF development; that was the unique privilege of the development lab in the US. In the meantime, IBM had decided it did not want to have anything to do with the on-going development work of the PARS application and its derivatives, so customers did that themselves. All this frustrated the talented people in the IASC, who were relegated to a purely support role. As the saying goes: "the devil finds work for idle hands". They saw that CPARS was starting to make inroads into the marketplace (not that IBM really cared since it was all IBM hardware, TPF/IPARS itself brought in no revenue and CPARS consumed more IBM MIPS and DASD than TPF did). Hence, they decided to try something similar, also to run under IBM's mainframe DOS operating system. As a base for this they already had a test tool called CPSIM, which they had developed to test IPARS without having to have ACP and thus a dedicated CPU. This tool they extended to cope with an operational environment and called it CPSIM-E. In the late 1970's they persuaded the newly created East African Airways (the airline of Kenya, Tanzania and Uganda) to use it, but that ill-fated airline had a very short life span. It succumbed to internal

political bickering amongst the three owner states and disintegrated. CPSIM-E died with it.

Nevertheless, CPARS and CPSIM-E had demonstrated that, at least for smaller airlines, running an IPARS type application in a standard environment was entirely feasible from both a performance and an economics point of view. Hence, the plotting continued, but a new approach was required. CPSIM-E could only run the standard, free, vanilla IPARS application package, the 1969 version, which the IASC kept as a test bed for checking out new TPF releases and fixes coming from the US development lab. However, the airline industry had by now been busy for 10 years building all kinds of new things in and around that base. We had departure control and cargo and ticketing and fare quote, as well as innumerable functional enhancements to the basic reservations capability. Vanilla IPARS was functionally primitive and not competitive with the systems being sold by the airlines themselves. Customers were choosing to buy an enhanced IPARS copy from Aer Lingus or BA or KLM (the three main vendors at the time) at around two million dollars a shot, rather than have a free, but functionally inadequate, copy of vanilla IPARS from IBM.

Now we arrive in 1980. TPF1 is on the scene and costs money: hence, the IBM systems software required to support any version of IPARS is no longer free. In fact, TPF cost a lot more than the “standard” IBM DOS operating system did. The gurus in the IBM IASC saw in this an opportunity to revive their idea of running IPARS in the DOS environment, but they needed an application base better than the vanilla IPARS they had tried with CPSIM-E. BA, the predominant vendor of systems by that time, was not interested, but KLM was. We at KLM were looking for a way to increase our market share in the lucrative business of selling and installing copies of KLM’s version of IPARS, CORDA. To cut a long story short, the IASC committed to produce an upgraded version of CPSIM-E (renamed to ALCS: AirLine Control System) and KLM committed to clean up CORDA so that it would run with the ALCS API, which was more strict and could never be exactly identical to TPF’s. All of this was done by 1982 and we at KLM embarked on a most successful series of projects to install CORDA under ALCS at BWIA, PAL, China Airways and THY. For the first half of the 1980’s KLM became the predominant supplier of reservations systems around the world, until BA and later Swissair decided to jump on the ALCS bandwagon as well. BA and Swissair jumping on the bandwagon more or less coincided with KLM’s retreat as one of the “leading lights” in the TPF world, as will become clear in the next chapter.

This success with the DOS version of ALCS for smaller carriers led automatically to the idea that the same could be done with an ALCS version running under the much more powerful MVS operating system, which dominated the upper end of the mainframe market. Then ALCS could be used by much bigger carriers. However, doing that would bring ALCS out from under the radar and make it a direct competitor to TPF itself, which would bring down the wrath of the Gods of the Hudson Valley (the mighty corporate IBM-land). Not to be deterred, the IASC approached KLM with this proposal; in 1982 I believe it was. Their proposal was that KLM would partner with the IASC to produce ALCS/MVS and that KLM itself would convert from TPF to that operating system base to show the way. It was 1982 and the JADE project was in its second year. We, and in particular me, were extremely unhappy with what we saw as the limbo status of TPF resulting from the complete absorption of all IBM’s TPF development resources by JADE and we saw no end in sight to this limbo. We did not want JADE. ALCS/MVS on the other hand promised to deliver everything on our TPF requirements list AND MORE, so we reacted very positively to the IASC’s advances and got down enthusiastically to working out the details.

Then, indeed, the Gods of the Hudson Valley found out what was going on and everything came to an abrupt halt. The IASC was forbidden to do anything further until IBM decided its “corporate strategy”. IBM was divided into two camps: IBM Domestic (i.e. the US), which wanted TPF and only TPF (even the DOS version of ALCS was not supported in the US and there were no installations there); and IBM World Trade, which wanted both ALCS and TPF. The battle raged for over two years and IBM World Trade finally won, but we in KLM had moved on to other things and JADE had finished by that time and thus the window of opportunity had closed. ALCS/MVS finally saw the light of day in 1987, but never made it into the big league as was originally intended. However, all the DOS version users, except Pakistan Airways, ultimately converted to ALCS/MVS and that is now the only supported version. Pakistan Airways finally went to be a hosted carrier in Sabre in 2001 instead.

As of today there are 23 installations using ALCS: 20 airline systems, 1 railway and 2 financial users. Hence, ALCS represents about 40% of the TPF user family in terms of number of installations, but in terms of transactions processed and people involved it is vastly less. As with TPF itself, installations have come and gone, but the biggest ALCS system was and still is

VARIG of Brazil which is currently running somewhere around 350 messages per second, I believe. ALCS kept up with the evolving TPF4.1 API until PUT 6 (August 1997), but abandoned this from PUT 7 (March 1998) when we saw all these weird and wonderful non-airline things like Persistent Collections (TPFCS, as it is now called) and Commit/Rollback appearing. IBM stated that these API features would never appear in ALCS, but to my knowledge nobody is using them in TPF either. They were developed for IBM's woefully unsuccessful attempts to launch TPF into new marketplaces: medical records and super web-servers. My personal interpretation of this announcement is that IBM considers ALCS to be "functionally mature" (i.e. pretty much frozen except for minor enhancements), though they have not said it. Along with that announcement from IBM in 1999 came the news that most of the "gurus" who had driven the whole ALCS development, in particular Steve Hobson, had left and ALCS support was down to a skeleton crew.

IBM World Trade's business case for ALCS/MVS in the mid-1980's rested on the prevailing theory of the time: all self-respecting airlines of any substance would ultimately have their

own reservations capability in-house. Hosting in someone else's system was a transitional phase lasting only as long as it took each airline to gather the size, the technical expertise and the confidence to be independent and "do their own thing". Up till the late-1980's all events in the marketplace supported that view. Hence, by the end of the 20<sup>th</sup> century it was predicted that there would be 400-500 in-house airline reservations systems in operation and IBM wanted the lion's share of that market. Offering the choice between ALCS and TPF was ultimately agreed to enhance that goal, which was why IBM World Trade won the battle for ALCS/MVS. Basically, that business model was scuppered good and proper by Sabre, as subsequent chapters will hopefully though not necessarily clarify, and airline reservations developed in a completely different direction.

My love affair with ALCS lasted from the early 1980's through to the mid-1990's, but all good things have to come to an end, unfortunately...

Bruce Taylor – Amsterdam, August 2001

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