Front Line Report:
To see or not to see

By Bert Ruitenberg

Last January there was a runway safety occurrence at Luxembourg Airport. A cargo B747 landed while there was a maintenance vehicle on the runway, close to the touchdown area. Fortunately there were no people injured, and the damage was limited to one of the B747's wheels, which had to be replaced, plus the roof of the maintenance vehicle, which had been somewhat modified from its original design.

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In December 2007 there was another runway safety occurrence, this time at Bucharest Otopeni Airport (Romania). A B737 passenger aircraft took off while a maintenance vehicle was on the runway, close to the mid-runway point. Fortunately no one was injured, and the damage was limited to the B737's main gear and left engine, plus the maintenance vehicle, which had to be written off.

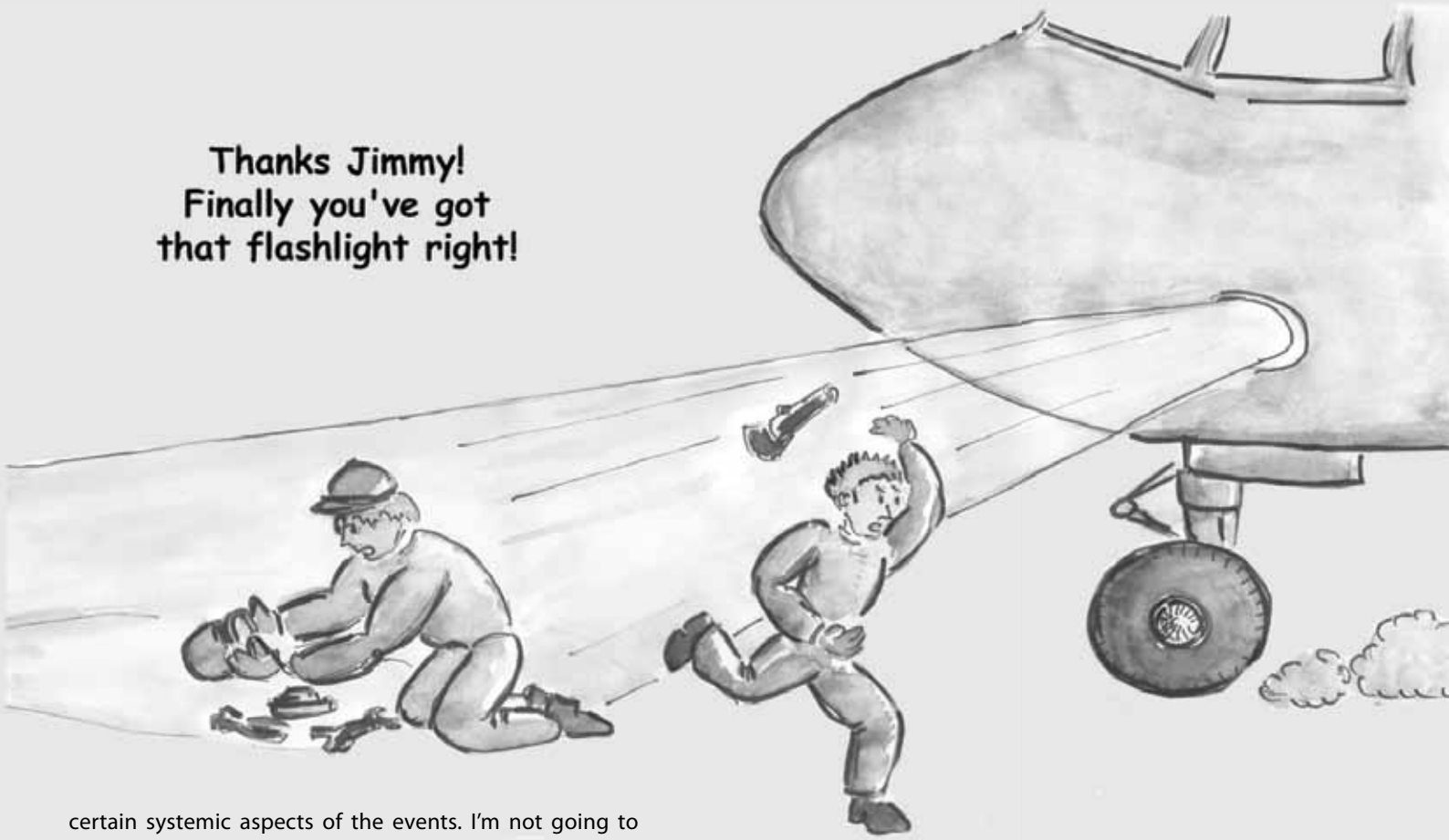
Despite the obvious differences between these two occurrences (e.g. landing vs departure; cargo vs passengers; aircraft types) there are also some similarities. Both events occurred during low visibility conditions, and both events have come under the scrutiny of the judicial authorities, with the result in the Bucharest case of a court case against one of the controllers on duty that day. And in both cases the ANSP almost immediately imposed disciplinary measures against the controllers on duty at the time of the occurrence.

Let's take a moment to reflect on the wisdom of taking disciplinary measures against the controllers.

Let's take a moment to reflect on the wisdom of taking disciplinary measures against the controllers. In both cases this was done within days of the occurrence, so well before any serious type of systemic safety investigation could have been completed. The ANSPs therefore must have felt obliged to "do something" as a result of the commotion that undoubtedly arose after the media got hold of the event. It must provide a certain kind of satisfaction to be able to tell reporters that the controllers involved have been suspended (or words to that effect) and that the population can sleep safely once more because surely something like this can't happen again. And the same message is of course conveyed by the ANSP to the regulator: no worries, we have it all under control because we removed the perpetrators from the work floor. But I honestly hope that the ANSPs don't believe their own story.

Remember that I mentioned that the disciplinary actions were taken within days of the occurrence and before a systemic safety investigation had been completed? The aim of contemporary safety investigations is not only to reconstruct what happened and how it happened, but more importantly to explain why it happened and with that knowledge/understanding, to present recommendations as to how similar events can be prevented from happening in the future.

In no way would I like here to pretend to assume the role of the competent investigation authorities which are looking into those occurrences, but based on my experience as a controller and a safety expert I would be curious about



certain systemic aspects of the events. I'm not going to provide an exhaustive list here, I just want to mention some key words from the SHEL model: software (low visibility procedures and runway occupancy indication method), hardware (ground radar availability, aerodrome layout and communication equipment) and liveware (training, currency, staffing and rostering).[1] The question that begs answering in both investigations is: why were the controllers convinced that the runway was clear when they authorised the aircraft to land/take off? I'm pretty sure that elements of the answer are to be found by looking into the key areas which I indicated above.

Going back to the systemic nature of a contemporary safety investigation, there's a related question which I'd like to pose with respect to the two occurrences: why was routine maintenance work being carried out on a runway under low visibility conditions? My philosophy about runway maintenance work is simple: either it is routine maintenance work which can be done at any time in principle, in which case you do it when the runway is closed, or it is essential maintenance work which has to be done immediately because otherwise the runway cannot be used, for which you close the runway until the repair is completed. Either way, the runway is closed when maintenance work is taking place.

Why was routine maintenance work being carried out on a runway under low visibility conditions?

OK, I can already hear the critics pointing out that it's easy for me to say this, working at an airport with six runways and all that. My reply would be that they're absolutely right, and that for airports with a mere one or two runways it is far better to keep a runway open during maintenance work, especially under low visibility conditions. Admittedly there will be the occasional accident like those in Bucharest and Luxembourg, but at all other times the maintenance work gets completed nicely as planned (never mind the weather), which is what matters to us. Yeah, right!

Again, my short article here is no substitution for a full systemic safety investigation, but indulge me and try and give an honest answer to the following question: which is more likely to result in the prevention of events similar to those described here in the future, disciplining and/or prosecuting the individual controllers involved, or performing runway maintenance only on closed runways?

I thought so. If you can see it, let's hope the various authorities concerned will see it too...

1- The fourth element of the SHEL model, environment, is not included because I lack information on this aspect from both events.