

Air safety and the scramble for profits

The background to the air collision over Germany

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At the beginning of this month two jets collided over Lake Constance on the Swiss-German border, resulting in the death of 71 people. The cause of this tragedy is to be found in devastating cost-cutting measures and staff shortages in flight monitoring agencies in the private sector.

Last week despairing relatives stood stunned before the strewn wreckage of the two aircraft. The 45 child victims, all from the Russian autonomous republic of Bashkiria in the southern Urals, were on a flight to the Mediterranean coast of Spain as a reward for their achievements at school.

Not only the tragic nature of this disaster, but also the fact that it was caused by the increasing, almost routine, negligence of air safety authorities gave rise to shock and consternation worldwide.

According to the results of investigations released so far, the following picture has emerged:

The Swiss air traffic controller on duty that night was alone in the control centre during the critical moments before the accident, while his colleague was taking a break in another room and could not be reached. The chairman of the Swiss air safety firm, Skyguide, was quick to point out that this contradicted operational regulations, and deemed the traffic controller on duty personally responsible.

But this is only half the story. Breaks taken against the rules have been tolerated by Skyguide up until now and are necessitated by the unbearable workload placed on air traffic controllers. According to the Swiss newspaper *Sonntagszeitung*, every fifth post for the job of air traffic controller in the Alpine Republic is unfilled. The reason for this is the implementation of economy measures.

Skyguide, formally known as Swisscontrol, is 99 percent owned by Switzerland, but it is nevertheless a profit-oriented private firm like Germany's Deutsche Flugsicherung GmbH or Britain's National Air Traffic Services. According to a recent edition of the German newspaper *Die Zeit*, the two Swiss airlines, Swissair and Crossair, had asked Skyguard to undertake cost-cutting measures before they amalgamated to form the new Swiss Air Lines.

Consequently, five years ago, in 1997, the air traffic security company even went so far as to occasionally suspend the training of air traffic controllers, thereby producing the current shortage of qualified employees and increasing the burden of work placed upon them.

The second important observation arising from investigations is that the so-called Short Term Conflict Alert (STCA) system was not available to the flight controller who had to supervise five flights over two frequencies on the night of the accident. Owing to maintenance work on operations software, it was switched off at 23.00 hours.

This system is crucial for the monitoring of air traffic. If aircraft come onto a collision course, they usually appear on the monitoring screen as blinking red dots, instead of green in normal circumstances, and an

acoustic signal is given. Without this system traffic control demands considerably more attention and concentration and air safety is radically reduced when the slightest diversion or problem arises for the controller.

The Skyguide executive board justified the disabling of the collision alert system by pointing out that maintenance work is essential for the continuance of air safety. But what the board did not say was that, owing to reasons of cost, Skyguide had only one fully functional STCA system. In other countries, like France, companies have four backup systems equipped with STCA.

The back-up system, used by the Swiss Skyguide company during maintenance work, has a crucial deficiency. It indicates no distinction between the colours of normal flights and flights on collision course. In other words, the flight paths of aircraft on a collision course are also shown in green.

At the beginning of last week, Jean Overney, head of the Aircraft Accident Authority (BFU), drew attention to the fact that his organisation had only recently produced a safety report querying this deficit.

In addition to the maintenance work on the collision alert system, repair work was being carried out on Skyguide's telephone system on the night of the catastrophe. Three out of four telephone lines were closed and only one emergency line was available. This seriously aggravated the work of the air traffic controller on duty at the time. He wasted several minutes vainly trying to contact Friedrichshafen Airport to coordinate the landing approach of another aircraft.

In the UCA (Upper Area Control) regional flight headquarters in Karlsruhe, 180 kilometres north of Zurich, all warning systems took effect as the Russian Tupolev and the DHL Boeing freight carrier came onto collision course. The Karlsruhe flight controllers desperately tried to reach and warn their colleagues in Zurich, but Skyguide's telephone lines were blocked in the decisive minutes before the crash.

The analysis of the flight data recorder provides a log of the tragedy. Just 45 seconds before the collision, the Russian pilot received a warning from his onboard computer about the impending collision, which instructed him to take upward evasive action. The Boeing pilot received the same warning from his anti-collision system, but it told him to reduce his altitude.

Just one second later, 44 seconds before the collision, the Swiss air traffic controller instructed the Tupolev to lose height as quickly as possible, contrary to the automatic warning he had just received. In view of these contradictory instructions, the pilot hesitated. He reacted only following the second urgent request from the air traffic controller, and 25 seconds before the collision the Tupolev began to reduce its altitude. Fatally, at this time, the Boeing cargo plane had already initiated its own descent, placing both machines at a similar altitude and on a collision course.

It is not the first time that Swiss flight safety has failed. In November 2001, 24 people died when a plane belonging to Crossair smashed into a mountain during its approach to Zurich. The pilot had tried to approach the airport flying by sight, and made mistakes. In addition, the Skyguide controller who was monitoring the approach apparently did not warn him.

In January 2000, the crash of another Crossair machine led to the death of ten passengers. When starting off, instead of flying a left curve the pilot flew right, and rammed his plane into the ground. The investigation into this accident is still ongoing, but here also it appears the air traffic controllers had not warned the pilot. Four months later, in May 2000, maintenance work on the Skyguide computer system led to a server failure, which resulted in a near miss between two planes approaching Zurich.

Two years earlier, in June 1998, a similar near miss led to a safety investigation. The report by the air traffic control authority found clear shortcomings in the Zurich radar system and spoke of "safety-relevant problems".

In other words, the problems have been well known for years, but on cost grounds they were insufficiently remedied or not rectified at all.

Up to date, Zurich still lacks a primary radar system. Skyguide has only a secondary radar system, which relies on transponders built into planes for data transfer. If these transponders fail, or are switched off, then pilots are practically flying blind. The installation of a primary radar system has been demanded by the BFU for a long time.

Neglect of flight safety is far from being only a Swiss problem. This latest tragedy only makes clear a development that is taking place in Europe and worldwide.

Since the beginning of the 1990s, fundamental changes have been carried out in European aviation in the name of the "liberalisation of air travel". At the heart of these changes was the privatisation of the airlines, which were increasingly exposed to a fight for survival in the free market. Companies were confronted with the necessity to make themselves competitive, in particular compared with the USA, where the market in air travel had been liberalised and airlines privatised almost 10 years earlier.

At the beginning of 2000, European Union Commission President Romano Prodi announced Brussels' liberalisation policies in the areas of electricity, telecommunications and air travel:

"My aim is it to make Europe the place where business initiative can unfold most easily in the world," he said. What this meant quickly became apparent.

For several years, European airlines have been synonymous with mass sackings, wage cuts, rising workloads and spectacular business collapses, such as Belgium's Sabena and Swissair last year.

The next step has been to include the airports and air traffic control in the competitive struggle of the airlines, because they form large cost factors. This has placed the question of maintaining flight safety directly on the agenda, and the consequence were made clear by this latest disaster near Bodensee. This tragic accident was entirely avoidable. If the company responsible for air traffic control had had sufficient personnel on duty and adequate technical systems in operation, it would not have occurred.

The liberalisation of European air space is being carried out ever more rapidly, with necessary standardisation and harmonisation linked to free market principles. By the year 2004, a uniform European air space (European Single Sky) is to be created, in order to overcome the deep-going legal and technical differences that presently splinter it. At present, 49 air traffic control centres operate within the context of 31 national systems, with equipment supplied by 18 different companies in Europe. The computers use 22 different operating systems and 30 programming languages. But instead of placing the improvement in air safety at the centre of the restructuring, the changes in air traffic control are aimed at reducing costs and increasing competitiveness.

Marc Baumgartner, president of the International Federation of Air Traffic Controllers' Associations (IFATCA), told the press that "rising commercial pressure had led for years to air traffic control companies training too few air traffic controllers and not making sufficient investments in important technical equipment. Throughout Europe, 2,000 air traffic controllers are lacking. Skyguide is certainly not an individual case. Many air traffic control companies, e.g., the German DFS, no longer do things that they did previously, when they were still state owned."

Baumgartner said air traffic controllers were burdened with heavy workloads: "Through commercial pressure, air traffic control companies try to operate more cheaply. Emphasis is placed on personnel expenses, which constitute 50-60 percent of their operating costs."

In view of the constant increase in the volume air traffic in Europe, rising annually by more than five percent, this threatens to become an ever-larger problem, because the EU Commission is set on unleashing a competitive struggle between the air traffic control companies. Initial plans mention "financial incentives" for the "most productive air traffic controllers".

Air traffic controllers have taken strike action in a number of European countries, warning of drastically sinking safety standards. Nicolas Hinchliffe, a representative of the association of European air traffic controllers' trade unions ATCEUC, told the *World Socialist Web Site* how dangerous such "a system of financial incentives" is, and why, with their strike, the air traffic controllers wanted to draw attention to the threat of worsening flight safety:

"Flight safety cannot become a business. This is exactly what the Skyguide example has now made clear again. Skyguide faced pressure from the airlines to lower costs. The suggestions of the EU Commission go in the same direction, to introduce such a system European-wide."

The planned new European-wide flight corridors should enable flights to be supervised by a single air traffic controller, with several transfers between different operators being avoided. However, air traffic management is to be operated by the "most productive", i.e., the cheapest air traffic control centre.

The chaotic and dangerous conditions this will engender can be seen in Britain, where National Air Traffic Control (NATS) was privatised eight months ago. Since then, delays have risen markedly, with 50 percent of all delays in Europe being registered in Britain. Even worse is the fact that, since privatisation at the end of last year, there have already been 44 near-collisions. The airlines now own a 49 percent share in NATS, which, as Hinchliffe noted, have "completely opposed interests to the air traffic controllers" and have "issued the order to lower costs further".



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