The Bombing of Zurich

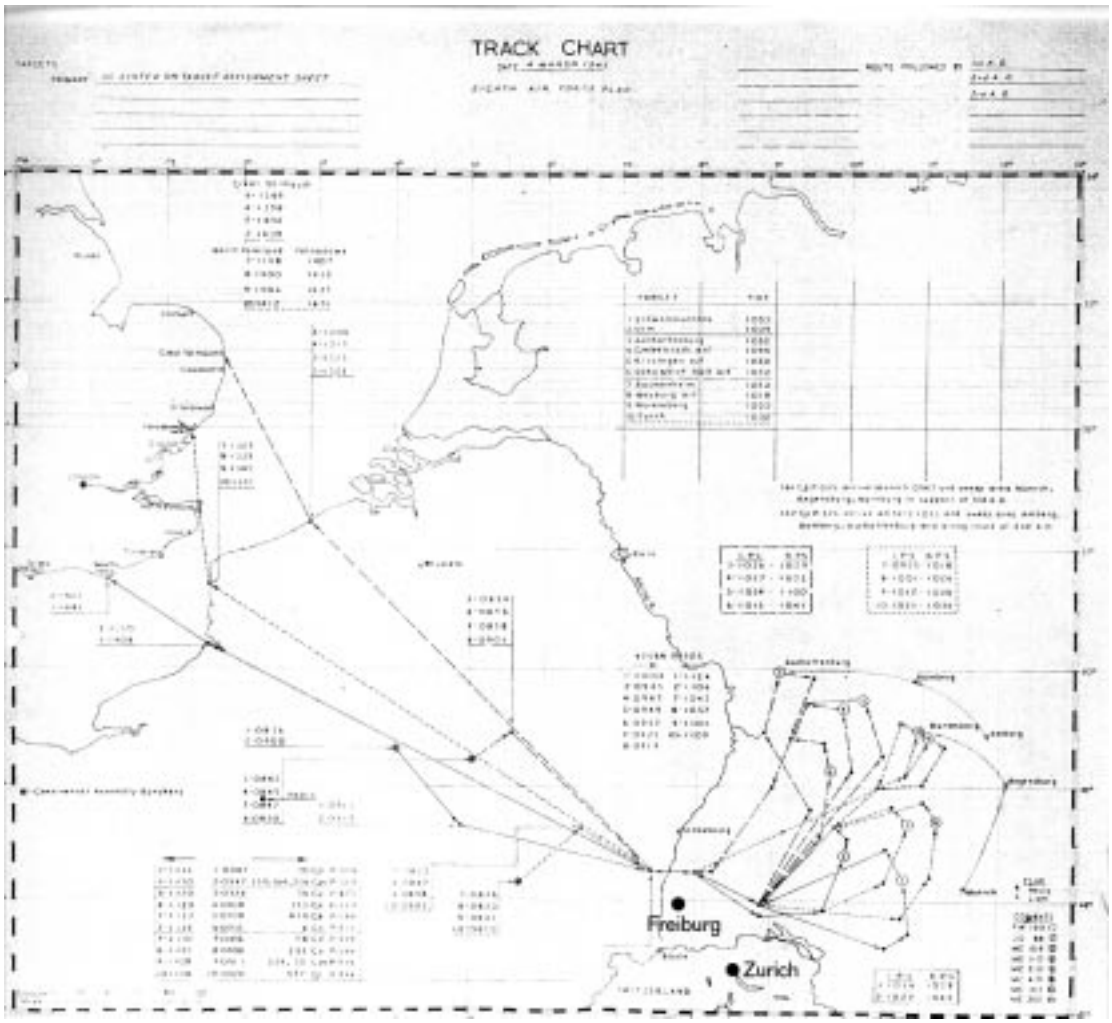
DR. JONATHAN E. HELMREICH

Editorial Abstract: Accidental bombings are not new, but court-martialing crews for such "fog-of-war" incidents is rare. On 4 March 1945, six B-24s dropped 12 tons of incendiaries and 12.5 tons of high-explosive bombs on Zurich, Switzerland—a neutral country. This is an account of how navigation errors, poor weather, and crew aggressiveness caused that to happen and how the officers of the lead B-24 fared when they were court-martialed. Interestingly, the presiding officer in the court-martial proceedings was Col James M. Stewart (of Hollywood fame). To more fully appreciate this study, we suggest you read Dr. Helmreich's earlier piece, "The Diplomacy of Apology: US Bombings of Switzerland during World War II," published in the May–June 1977 issue of Air University Review *and also available at http://www.airpower.maxwell.af.mil/airchronicles/apj/apj00/sum00/helmreich.html. There he provides a comprehensive account of World War II bombing of Switzerland, which began with a scattering of incidents in 1943 and eventually led to increasingly heavy attacks until the 4 March bombing of both Zurich and Basel. Both articles show how conflicts can arise between airmen and diplomats over issues of crew safety and mission accomplishment to win a war.*

> The primary target is the tank depot at Aschaffenburg, Germany, which has come into importance recently because of bombing attacks against targets of a similar nature in this area. As a consequence, P.R.U. (Photo-reconnaissance Unit) indicates at the moment about double the ordinary number of tanks in this depot for purposes of repair and reconditioning. . . . The target for this Group this morning will provide, it is hoped, a crippling blow to the German war machine. The target itself is approached on a heading of about 14° in a bomb run of approximately 40 miles. The I. P. is located. . . .[1]

SO BEGAN THE briefing for the 392d Bombardment Group under 2d Air Division Field Order 618 for 4 March 1945. The mission proved ill fated: it bombed a major city 15 miles within the territory of a neutral power with which the United States was striving to maintain good relations. Five Swiss civilians were killed. Following on previous bombings in border areas, the incident became a cause célèbre. It drew the attention of officers and diplomatic officials to the very top of the bureaucracy, caused an annoyed mission of apology by Gen Carl A. "Tooey" Spaatz, and the payment

of a multimillion-dollar indemnity by the United States to Switzerland.[2] It also provoked a court-martial, apparently the first criminal prosecution ever of US soldiers for acts of friendly fire. Another trial on similar friendly-fire charges would not occur again



Track chart for the Eighth Air Force, 4 March 1945, showing the routes, timing, and targets for all three air divisions. (Freiburg has been added to the chart.)

until decades and wars later,* triggered by an April 1994 downing of two US helicopters in Iraq. That tragedy and the 1999 bombing of the Chinese Embassy in Belgrade, Serbia, by US planes flying for the North Atlantic Treaty Organization, have provoked questions. How could such events happen? All too easily, as the story of the 1945 episode reveals.

On 4 March 1945, as the crews prepared to implement Field Order 618, it was still early, 0330 hours. The officers and crews had already been up for some time. Two hours before, Lt William R. Sincock had been wakened and told that prebriefing for officers of lead crews was at 0230, with the main briefing an hour later.

*Editor's Note: Interestingly enough, there was a little-known incident during the Korean War that bears some similarity to this one. In October 1950, two USAF F-80s mistakenly attacked an airfield near Sukhaya Rechka, USSR. The United States quickly apologized to the Soviet Union, and the pilots were court-martialed. (They were, however, acquitted, as the attack resulted from navigational error rather than criminal culpability.)

Lieutenant Sincock and his crew took the job of lead seriously. It was his 22d mission—all of them flown as first pilot—and his 16th as a lead. Commissioned into the infantry upon graduation from the University of Michigan in 1941, he had served as a radio and communications instructor at a variety of Army schools. In December 1942, six months after his promotion to first lieutenant, he applied for pilot training. He received his wings a year later and was assigned to four-engine transition school. In February 1944, he went to Westover Field in Massachusetts, where Lt Theodore Q. Balides was assigned to his crew as dead-reckoning (DR) navigator. The patriotic son of a Greek immigrant, Balides in civilian life had been an electrician. He had enlisted two years earlier with the intention of becoming a pilot but had washed out of pilot school and had been transferred to Westover Field.

Most of the briefing was devoted to a review of the points of visual identification recognizable on the bombing run. Low- and high-altitude photographs of the target area were shown to assure positive identification.

Changes in orders came faster and faster. The men were sent to Georgia, then to Langley Field, Virginia, and in July 1944 were given a plane to fly to Ireland. After training on radar equipment at the Eighth Air Force School at Clinto, they were assigned to the 392d Group, RAF Wendling.

Their records, for men of 25 and 23 years of age, respectively, were outstanding. One of Sincock's commanding officers termed him "superior." He also used the word *aggressive*, an adjective of which he and many other young pilots of the day were proud.

Field Order 618 directed approximately 275 B-24 bombers of the 2d Air Division of the Eighth Air Force to a variety of targets in southern Germany. The 2d, 20th, and 96th Combat Wings were to attack the jet airdromes at Giebelstadt, Schwabisch-Hall, and Kitzingen; the 14th Wing was assigned the extensive Aschaffenburg tank depot as its target. It was hoped that the wing could bomb visually. If this were not possible and Gee-H, an electronic bombing aid, could be used, the target remained the same. Only if H2X, a form of radar, were the only instrumental aid available would the 14th Wing resort to its tertiary target, the railroad marshaling yards at Aschaffenburg. Like all yards in the area, these were strained almost to the breaking point, handling nearly twenty-five hundred railway cars every 24 hours. Their disruption would hamper communications between the whole southern region of Germany and the battle lines.

The intelligence officer reported that only light flak could be expected over the battlefront along the Rhine River. This was cold comfort to the crews, whose response was prolonged boos. Most of the briefing was devoted to a review of the points of visual identification recognizable on the bombing run. Low- and high-altitude photographs of the target area were shown to assure positive identification. Although the weather forecast was for some cloudiness, visual sighting was anticipated.

Were clouds to close in, the aircraft were reliant upon three instruments to aid the DR navigator. The Gee and Gee-H equipment was located in that navigator's compartment. The H2X was in another compartment, operated by an officer especially trained to work with the tricky apparatus.

Gee was a prime radio navigational aid used by the Army Air Forces with considerable success since its introduction about June 1943. The aircraft's position could be determined by signals received from established ground stations displayed on a cathode-ray tube. Strong signals were a necessity. Unfortunately, ground stations could be established only as far forward as the front lines, which meant that Gee range was limited. More annoying was the skill with which the Germans had learned to jam the radio transmission

with artificial interference, making the scope unintelligible.

Gee-H was a refinement of the same system. Its main purpose was for bombing through an overcast. Unlike Gee, the newer equipment had a transmitter of its own that could trigger signals from ground stations. The high command was anxious that the Germans learn as little about Gee-H as possible; its use was restricted to determination of the initial point (IP) of bombing runs partly for this reason. Gee-H also was difficult and slow to use in determining a fixed position. Furthermore, it was subject to interference by other US aircraft, for the ground stations could handle only a limited number of signals at a time. Gee-H equipment was therefore placed only in lead ships, those that would set the course of a bombing run.

"Mickey" was the nickname of the H2X equipment, and its operators were doomed to fly through the war known as "Mickey men." H2X transmitted a radar pulse that was reflected by objects on the surface of the Earth and translated into a blip on a cathode-ray scope. Under good conditions, its spinner antenna could have a range of over 50 miles, and an experienced operator could interpret the pictures with a fair amount of accuracy. Water provided almost no reflection, while steel and concrete did much better. Cities, coastlines, and especially marshaling yards gave good pictures. Rolling hills and mountains could provide confusing returns that might baffle the most skilled operator. Though Mickey was especially useful in bombing runs and making landfalls, it could also provide position fixes in conjunction with the estimates of the DR navigator.

The pilots' briefing, which followed the main briefing, concentrated on the complex procedures necessary to put four combat wings in the air in protective formation. Numerous heavy bomber bases were crowded together in the English countryside of East Anglia, normally one bombardment group to a base. It took careful planning and timing to launch the many groups involved in the huge air raids and to arrange for their rendezvous first in wing formation, then in division formation, and eventually with their fighter escorts. Formation flying was a necessity. Until fighter bases could be established in forward position on the Continent, the bombers would fly great distances without fighter cover, having to depend upon their own limited armament for protection. Alone, a lumbering bomber had little chance to survive. The guns of an entire, tightly held formation might keep the German fighters at bay. Another reason for formation flying was the shortage of highly trained and experienced crews. The best and most experienced pilots and navigators were therefore given formation lead responsibilities and flew planes marked for easy identification; the responsibilities of other crews were to hold a tight formation, to obey orders, and to keep their eyes open.

Formation flying, if it provided some safety from enemy attack, also presented hazards. Collision was a possibility even in fair weather. Fog made the situation more dangerous. Should an engine in one aircraft malfunction or be destroyed by enemy gunfire, the plane might lurch out of the control of even the strongest pilot. Unless the pilot recovered quickly, collision with a wingman was more than likely.

Assembly was an especially trying process. Each squadron had to follow its planned course exactly, or it might miss rendezvous with its group and eventually with groups from other bases to form the combat wing. Because of the time required for takeoffs, the groups within a wing flew different paths that theoretically brought all the groups in a wing together at the same point and time. At rendezvous beacons, the groups would fly in identifiable holding patterns, such as the 392d's counterclockwise circle, until stragglers had been picked up and the wing could move on toward the division assembly line. Many pilots feared these holding patterns because for several minutes each time around they might be blinded by the rising sun. Collisions and near misses were not unusual.

(Photographs courtesy of the Air Force Historical Research Agency)

Three that made it back. The pictures above show damage incurred on previous missions flown by the 392d Bombardment Group's B-24s. By 1945, crew aggressiveness had proven itself an essential trait for completing difficult and dangerous missions.

The weather on 4 March was such that planners decided that formation should take place over the Continent. Wing assembly was to be at 14,000 feet over Buncher C-3, near Verdun, France, prior to 0811. The 44th Bombardment Group, which the 392d was to trail, would be at 13,000 feet, and the 491st would fly at 12,000 feet. Within his group, Sincock was to lead the 10 planes of the high right squadron following the lead squadron of the group command pilot. After additional circling and flying of some triangular courses, the wing was to rendezvous with the rest of the division, meet its fighter escort at 0921, and be 20,000 feet over Aschaffenburg at 1052.

The briefing over, Sincock dressed for high-altitude flying and walked to aircraft number 385. The rest of the officers and crew were assembling. The pilot and the engineer went over the checklist; the plane was in good shape. The armorer-gunner reported the guns appeared serviceable; the bombsight and the automatic pilot also checked out as serviceable. Balides, embarking on his 24th mission, was there with his track chart and flight plan. At 0555 their turn came, and the Liberator headed down runway 26.

As the Norfolk countryside fell away, the DR navigator climbed forward to the nose of the ship and checked the Gee receiver. The box worked well, but when he threw the Gee-H switch for the standard post takeoff test, the scope "crumpled." He turned it off quickly and discovered that even the regular Gee reception was no longer coming in.

News of this failure was decisive for the pilot. There was no reason to continue the flight. The Mickey operator had already called in that the H2X was not functioning. Bombing was to be done either by Gee-H or H2X if visual sightings were not possible. Without operative equipment, they were useless as a lead crew; and because they were a lead, the ship was not carrying a full complement of bombs and would make only an insignificant contribution in a tagalong role.

No member of the crew wanted to abort. Some of the worst parts of the mission were

now over—the tense waiting in the briefing room and the cold, dark, and endless minutes before takeoff. Scrubbing would mean that no one would receive a mission credit and the group's bombing effort would be hindered. Just a few ships had Gee-H, and out of the entire 2d Air Division only some 26 bombers carried H2X radar. One spare lead ship had been left at the field, however. Its Mickey was not in the best of condition, but obviously the rest of its equipment would be better than nothing at all. Lieutenant Sincock radioed Major Keilman, the command pilot in the lead squadron, for permission to return to the base and change planes. It was granted, but no landings were possible until all the other Liberators were off the ground.

It took only 32 minutes to transfer equipment and check out aircraft number 577. Takeoff at 0702 still put the crew 27 minutes behind the last feasible time for mission takeoff. The minutes had to be made up somehow, so rather than make a detour by way of Buncher 24, as called for by the flight plan, the navigator headed the plane at the pilot's request directly toward the briefed route to the Continent, climbing on the way.

At Buncher C-3, matters were not going well. The chief of staff of the 96th Combat Wing was then acting as 2d Air Division observer. It was his task to assist, correct, and maintain the formation of the division as it penetrated Germany. Upon takeoff, he wondered why the meteorologists had suggested that assembly occur over the Continent rather than closer to the bases, as was the normal procedure. When he reached the Continent, his puzzlement increased, for he found a cloud layer from 12,000 to 17,000 feet. No units were visible, although his pilotage reckoning showed that he was in the identical location from which the lead pilot of the 96th Combat Wing claimed to be reporting:

> I went beneath the layer and searched, then above, and below and above again. It did not dawn on me that any formation could possibly be flying within these clouds. However, while climbing through, I by chance passed a Group and discovered that the entire Wing formation was doing the impossible. . . .The weather as it appeared to the weather scouts was not insurmountable but . . . the contrails created by the First and Third Divisions plus the initial units of the Second Division created a cloud layer which units could not climb over nor descend below, for they created their own weather. It is unbelievable that so many units could fly so long in such conditions, turn around and withdraw without heavy losses from collision.

The 2d Combat Wing was meanwhile having a problem all its own. Its assembly beacon, A-69, had not been turned on until 0730, barely 40 minutes before wing assembly was to be completed. Moreover, the beacon was situated 15 miles northeast of its briefed position. A cog had slipped in the communications between the Eighth Air Force and the Ninth Air Force, which controlled the beacon. This difficulty, as well as the clouds proved too much. The 2d Combat Wing never did assemble that day. Giebelstadt was spared, as 59 aircraft abandoned the mission and five crews elected to bomb with other wings.[3]

While the various wings of the 2d Air Division were trying to pull themselves together, B-24H number 577 climbed across the English Channel. As soon as a course had been established, the engineer and the DR navigator hastened to the nose of the ship, where they repaired a gas leak in a heater. By the time the plane and its crew reached the European coast, they had adjusted course to compensate for a 15-mile drift to the right. Meanwhile, wing assembly had been raised to 18,000, then 20,000, and finally to 23,000 feet, an altitude at which the Liberators began to handle sluggishly and formation flying became all the more difficult. The thick, twisting contrails still prevented any visual sightings. It was too late to make either group or wing assembly; the only chance was to intercept the wing at the division assembly line. Lieutenant Balides prescribed a course parallel to that line, and as they emerged from the clouds of the assembly area, they spotted the 44th Bombardment Group approximately 30 miles past Metz, France.

Lieutenant Sincock was relieved. The 392d was to fly in the trail of the 44th, so he knew he would spot his mates soon. He did, but the formation was a mess. The lead squadron had seven ships, but his own high squadron had only two. Sincock notified the deputy lead that he was taking over and learned that the latter had been unable to attract other ships of the squadron because the deputy's flare equipment was not operating properly. Upon assuming the lead, Sincock ordered his engineer to fire the red-yellow flares, which were the attraction signal for the 392d Group. Enough planes were circling about aimlessly that there was a good chance that some more members of the squadron or of other groups might join them. No craft from the 392d appeared, but one from the 445th did. It was one of the five planes from the 2d Combat Wing that had not given up the mission. Two planes from the 491st Group of the 14th Wing also joined the squadron, one of them being a Mickey ship. The extra navigational aid would have been welcome, but it served no purpose as only three of the six planes in the makeshift squadron could communicate with each other. Each group had its own radio frequency and had no knowledge of the frequencies used by the others.

It was not unusual for formations to become scrambled in bad weather, making the role of the lead ship more important. Matters began to straighten out. Lieutenant Balides had good Gee fixes and knew exactly where he was. Now that the formation had been found, it was time he and the bombardier helped each other don flak suits. No one liked wearing them any longer than necessary, but the crew made sure to have them on by the time they crossed the front lines.

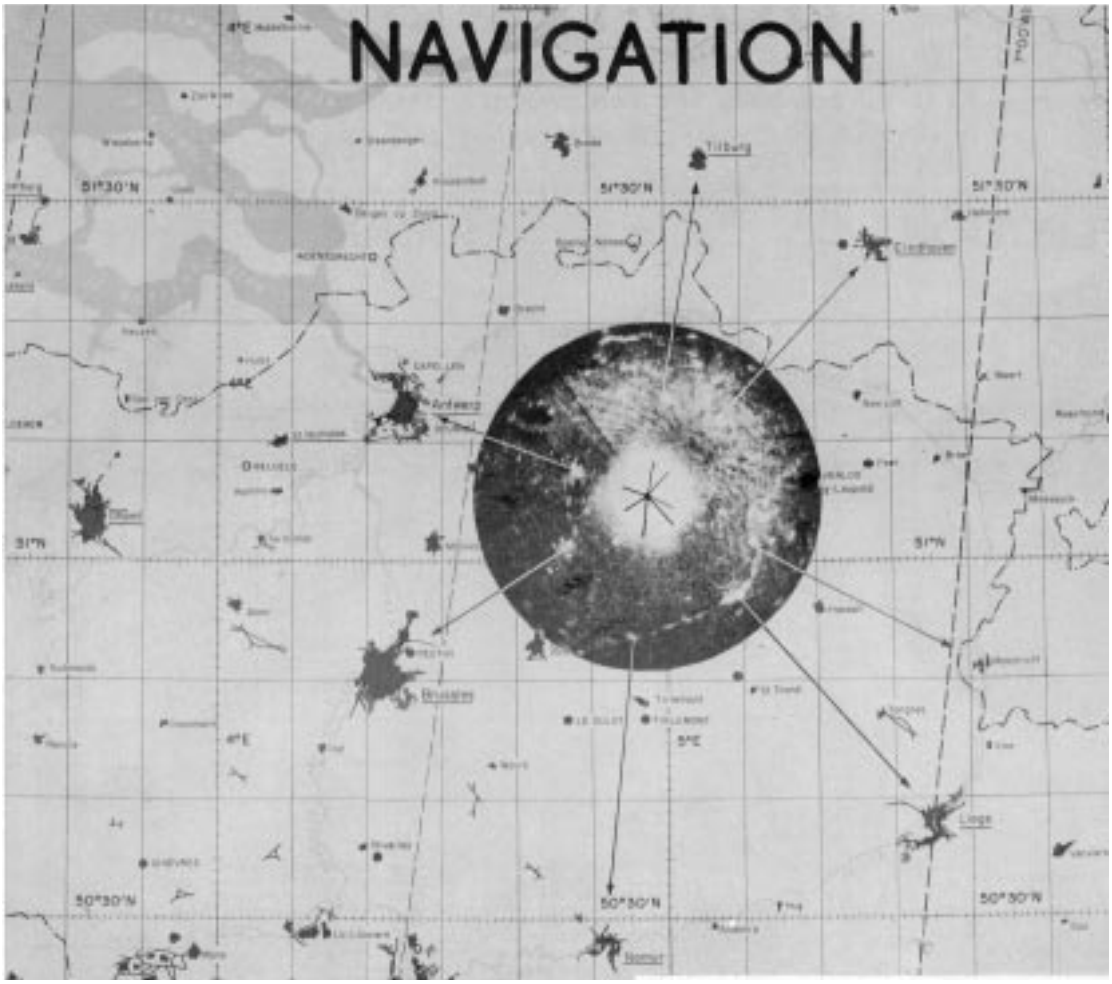
At 0923 the wing swung on the leg of its course that would take it over the Rhine. The Mickey operator began relaying fixes that coincided precisely with Balides's DR navigation, which in turn was corroborated by the good Gee reception still being received. At the briefed point on the southernmost part of their route, they turned left toward the initial point of the bomb run. The 44th Group was leading the 14th Wing and the entire 2d Air Division. Both Lieutenant Sincock and Major Keilman struggled to keep in contact with that lead as the continuing contrails and increasing cloud coverage reduced visibility. As the murk grew, word was received by VHF radio channel from the wing command pilot that the briefed target would be abandoned; the groups should attack targets of opportunity.

Suddenly the 44th, in an attempt to find a hole in the weather, made a number of unbriefed turns. Major Keilman and Lieutenant Sincock followed.

> I notified the Navigator at that time that we were making a 360°-turn, assuming that the lead squadron had decided to make a 360°-turn in the attempt to find a hole. I, perhaps, should have at this point said "Follow the pilot," rather than "We are making a 360°-turn." We made a number of turns at this point, the extent of which I do not know. I was attempting to maintain visual contact with the lead squadron and did not observe my instruments to any degree at that point. We may have made 360's and 180's, I don't know. It must have been very difficult for the Navigator to keep track of those turns at that point. During the second turn . . . I lost sight of the lead squadron, which already had become separated from the 44th Bomb Group.

It was indeed difficult for the navigator to track his position. Dead reckoning can cope with a sharp turn, and possibly with one or two sweeping formation-type turns in succession, but a series of such turns to both left and right is out of the question. Possibly with an air position indicator it could have been done, but number 577 did not have such an instrument. Lack of a wind reading for the current altitude made matters worse. The Mickey operator was getting some fixes, however, and the DR navigator plotted them on his track chart. They all seemed to indicate that the squadron was about 40 miles south of Stuttgart, Germany.

The H2X operator had less faith in his fixes than did Lieutenant Balides, for he had been having trouble with his equipment ever since he lowered the spinner antenna after

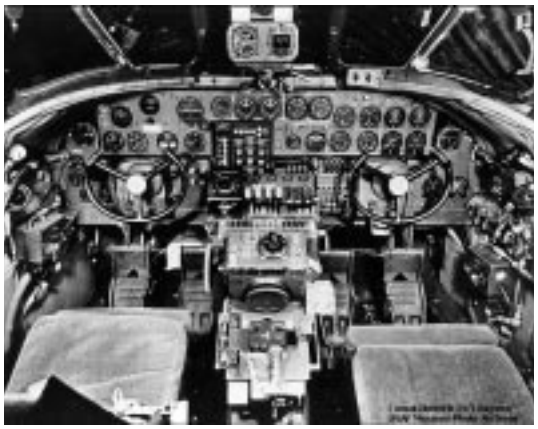


H2X was a self-contained radar device whose beam scanned the ground below the aircraft within a radius of up to 50 miles and provided a radar map of the terrain on its cathode-ray scope. The center of the scope represented the position of the aircraft, and the bright spots were presumed to be cities or landmarks.

takeoff. RAF Wendling was located near the Wash; the contrast between land and water should have been noticeable, yet definition was nil. Nor could he pick up the coast upon crossing the Channel. A tube was working poorly; when he asked the gunners to check the pressure pump, they told him it was not operating.

The Mickey operator had reported the malfunction to his pilot over the base area; they decided that, as only the tertiary target was to be bombed by H2X and as the Gee-H was working, the mission could continue. More fiddling with the H2X showed it could still pick up bright spots that might be presumed to be cities, although their outlines would not register. Over Brussels and Verdun, the Mickey man had made some fixes that he checked against the DR navigator's Gee fix with success. But then, for sizeable stretches of time, he could see no blips; the Mickey's range was down to 10 or 15 miles.

In search of the rest of his formation, Sincock kept turning in the clouds. Finally, a



The B-24's cockpit. Although mechanically complex, bomber cockpits showed few signs of the increasing electronic instrumentation supporting the mission. This included radar, radio navigation and bombing aids, and electronic countermeasures.

break appeared, and he spied the wing lead once more—with his bomb bay open. There was no trace of Major Keilman's squadron. The copilot succeeded in calling the group leader to inquire what the 44th was up to (lead planes did have limited information regarding the frequencies used by other leads). The reply was that the 44th was making a run on Fighter Control Point "O," which for that day was Stuttgart. Sincock's squadron was welcome to drop on their smoke markers.

Meanwhile, the navigator asked for an H2X fix—any kind of fix. The Mickey operator heard on the interphone at that instant that the 44th Group was making a run on Stuttgart:

> So I assumed that we were in the general area of Stuttgart, and if anything would give me a return, Stuttgart certainly would. I picked up a bright spot and took a fix from that and called the DR Navigator and told him the conditions under which I had taken the fix and then told him that due to the conditions, the fix was not reliable.

The H2X operator did give Balides the quadrants of his fix and said that if the town he was picking up was indeed Stuttgart, then that was their position; but he had no way of determining whether it was Stuttgart. The navigator wrote down the numbers of the quadrants, read them back, and then got out of the way so the bombardier could set up his racks for the bomb run.

For several minutes, the 44th's run was like any normal H2X run. There were few changes of course, and those were only five- or 10- degree variations. Then, with bomb bay doors still open, the leaders turned sharply right. Caught unaware, Sincock followed as quickly as he could. Such a turn would have been difficult at best to copy in clear weather; in the clouds, the pilot lost the leader after 30 or 40 degrees of turn.

Disgusted, Sincock decided that further maneuvering was useless and dangerous. Calls to Major Keilman did not bring a response, and while other groups could not be spotted, squadrons and occasional single craft would appear unexpectedly out of the mist in the most haphazard manner. The pilot therefore asked his navigator to give him a heading that would take the Liberator onto the briefed withdrawal route. This Balides promptly did without noticing that in entering the quadrants of the Mickey fix on his track chart, he transposed the minutes. The position was plotted as 48°50' North by 8°32' East instead of 48°32' North by 8°50' East. The error resulted in the officers believing they were flying some 25 miles farther north than they actually were. The fix was obtained at 1009; the navigator now estimated that after heading south for about 10 minutes to reach the flak gap, they would rejoin their planned withdrawal route.

Sincock and his crew had long been told that any bomb dropped on Germany was a good bomb and that there was not much sense to flying bombs across the Rhine and then flying them back. The pilot told his men to be alert for targets of opportunity on the withdrawal route. At about 1017, Balides started the formation on its turn onto the briefed withdrawal route. They had just begun to roll out on their new course when the H2X operator called that his scope showed a town coming up on their present heading but that he needed help in iden-

tifying it.

For the first 10 minutes of the withdrawal, the copilot of 577 had been vainly trying to contact the ship from the 491st Group flying the number five position in the squadron. Its spinner was "down," implying that its H2X was operating.* Three or four times he tried the group and squadron call numbers; he received no response, for the other craft was not operating on those frequencies. He had earlier been able to contact the leader of the 44th Group, but he did not talk with him after the abrupt turn away from Stuttgart. The weather was starting to clear, and for the first time in an hour the crew could see the ground; forward visibility was still limited.

The crew was well aware of the standing order that a target of opportunity could be considered anything that gave a return on the Mickey screen as long as it was in Germany. It was regular operating procedure for the group, but the pilot wanted more positive identification. To this day, no one is sure who first suggested that the town might be Freiburg, Germany. It was the logical assumption, for the charts showed Freiburg as the only city of any size within 30 miles lying on their present heading.

Sincock told the Mickey man to take them in over the town and then asked the pilotage navigator to watch for breaks in the clouds that would allow positive identification. Sincock would not rely on the faulty H2X equipment for actual bombing; he insisted on visual identification. The matter was up to the pilotage navigator.

Like the other officers on the ship, the pilotage navigator had experience: 19 missions, including six leads. Located in the nose turret, with by far the best visibility of any crew member, he was to make visual identifications and under visual conditions to guide the aircraft on the bomb run from its IP to the point where the bombardier picked up the target in his sight. Evasive action after the bombing

B-24 of the 2d Air Division operating during December 1944. Note that the radome for the H2X radar can be seen deployed below the aircraft.

was also under the pilotage navigator's direction.

By this time, the H2X operator and the DR navigator had reached agreement that they were in the Freiburg area. Balides had left his seat to make room for the bombardier and had taken his post at the salvo handle. The plane was now at 19,500 feet, and as the pilotage navigator peered down, he could see a large town, or about half of it, as the rest was obscured by ground haze. With him was the 1:500,000 Strasbourg map he had been briefed to bring, and he examined it closely for features that would help to identify Freiburg as they approached it on their 210° heading. He thought out loud over the interphone as he picked out terrain features identifiable as those of the German city. There was the patch of woods, and there the railroad and marshaling yards dividing the town in half on a north-south axis, with the small stream paralleling the marshaling yards and the railroad north of town. The woods were coming up at about the expected angle of 110°, and the plane would pass over a small neck of the patch. The marshaling yards, which could be the target if they bombed, were making their appearance fairly close to the 90° angle he expected from the map.

While the pilotage navigator was going over his check points, Balides interrupted. Freiburg was close to the front lines. They should be very sure they had not crossed the Rhine for fear of bombing their own troops.

*H2X's rotating spinner was enclosed in a radome which could be retracted into the bottom of the aircraft when the radar was not in use.

"We definitely have not crossed the Rhine River. I can see it on the other side of the town."

Six American B-24H bombers had dropped 12 tons of incendiary bombs and 12.5 tons of heavy explosives. . . . The gist of the specifications against Sincock was that he had "wrongfully and negligently caused bombs to be dropped in friendly territory."

The pilotage navigator continued with his checks. He was convinced: "That town is Freiburg."

The bombardier queried, "Are you sure it is Freiburg?"

"I am positive that is Freiburg."

Satisfied that his three navigators were in agreement, the pilot ordered the bombardier to pick out a mean point of impact (MPI), synchronize, and drop the bombs. The bombardier took over the ship. The downward visibility was no more than six miles.

> I chose as close to what I thought to be the center of the Marshaling Yard as possible. We had a very intense crosswind on this particular heading, and by the time I had fully engaged the bombsight, and had rolled up the indice to a point where I could see the ground, we had drifted considerably south of my chosen MPI.

Principally because of the poor weather, the visual run lasted just 60 seconds. Bombs away—code name "Peanut Butter"—was at 1019. Flak was drifting up, and the navigator urged the pilot to take evasive action. While they were doing so, the bombardier looked back to see that the bombs had landed for the most part in a wooded area and along a roadway. It was not a good strike, but the rest of the squadron might do better.

In dodging the antiaircraft fire, Sincock kept favoring the southwest. Four minutes after bombs away, they passed over a large, crooked river that the pilotage navigator readily identified as the Rhine. Visibility was improving, and soon the Gee box became free of German jamming. At 1032 Balides got a fix. It showed him to be 30 to 40 miles south of where he thought he was. The lattice lines of the Gee scope were difficult to read for that area, so he decided to wait a few minutes and try another fix. Ten minutes later, the Gee box again told him he was too far to the south.

> I saw we must be in this little tip of Switzerland, so I gave the Pilot a heading out. Once we got to this 1053 [Gee] fix, the cut there of the [Gee] lattice lines was perfect. There was no doubt at all where I was, so I gave the Pilot the proper heading back to the withdrawal route.

The crew was elated that the mission had been salvaged; they downed a few drinks in celebration when they got back to the base. Even the CO was pleased and told Sincock so. It was some hours later, when films were developed and telegrams began coming in, that Operations became worried. The young pilot did not understand at first why he was called back from the barracks to the Operations room. But as soon as he walked in and saw all the brass standing there, he knew something was wrong. "They looked like death warmed over. Then they told me, very softly, 'That wasn't Freiburg you bombed; it was Zurich.'"[4]

In total, six American B-24H bombers had dropped 12 tons of incendiary bombs and 12.5 tons of heavy explosives. The bombs were well clustered in a narrow strip. Twenty-three exploded in an open field. But "In der Hub," a locality at the very end of the bomb corridor, did suffer. Five persons were killed, around 22 were rendered homeless, and several houses were destroyed.[5]

The court-martial was held 1 June at the headquarters of the 2d Air Division, Eighth Air Force, Horsham St. Faith, England. Col James M. Stewart, known more for his acting than his excellent war record, was the presiding officer. The charges were that Lt William Sincock and Lt Theodore Balides had violated the 96th Article of War. The gist of the

specifications against Sincock was that he had "wrongfully and negligently caused bombs to be dropped in friendly territory." The specifications regarding Balides's violation were that he had failed to maintain a complete and accurate log and chart, negligently and incorrectly determined the location of the aircraft, and conveyed the incorrect information to the commanding officer of the craft, thus causing him to drop bombs on friendly territory. Maximum punishments if verdicts of guilty were reached could be dismissal from the service, forfeiture of pay and other rights and privileges, and confinement at hard labor for life. Although the officers were tried together, each faced separate charges. Their defense was prepared by a captain with considerable previous experience as a civilian attorney and by two assistant defense counsels. The trial judge advocate (TJA) prosecuted the case with the aid of one assistant. Both defendants pleaded not guilty.

The trial opened with extensive statements by the prosecution and the defense. The TJA and the defense counsel were in agreement regarding the basic facts, including the course of the aircraft, the tracking chart error made by the navigator, and the erroneous bombing. The main issue was whether the defendants were guilty of culpable negligence. Was there a degree of negligence that would be universally recognized as gross and as such a departure from the conduct of a reasonable and prudent man in the same circumstances as to warrant inference of indifference to the consequences of what was done?

Defense counsel took great pains to point out the difference between civil and criminal law regarding negligence. A tort in civil law involves the right of redress for damages against an individual who has not taken ordinary care in his actions. But criminal negligence, the issue at point in the trial, requires a state of moral turpitude and a state of mind of criminal intent. Simple negligence cannot result in criminal conviction; rather, the negligence has to be so great as to infer intent to do harm. For the court to convict the pilot or the DR navigator, the TJA would have to prove more than failure to follow Air Force procedures or an error in navigational calculations; he would have to prove willful negligence such as to infer criminal intent.

The main issue was whether the defendants were guilty of culpable negligence.

The defense argued that, regardless of how tragic the attack was,

> it was the unhappy, but nevertheless normal, consequence of a combination of circumstances consisting of the adverse weather encountered on that day, the very severe maneuvering that this crew, as well as others, had to engage in for survival, the stress and strain of an operational mission, the malfunctioning of [the] equipment at their command, and lastly, an aggressive attitude on the part of this crew to salvage something from an apparent mission failure.

The prosecution's presentation was thorough. The officers who had given the early morning briefings to the squadron and group were called upon to reconstruct their statements of 4 March. The intelligence officer eventually admitted that at no time had he mentioned that the scheduled course would take the group within 14.5 miles of Switzerland. Nor was that information explicit in the field order; only if the navigator plotted the route ahead of time and compared it with the border of Switzerland would it be evident.

The responsibility of the DR navigator in the high right squadron became more clouded when the major who was group navigator for the 392d testified that "as far as the navigation of a mission is concerned the primary duty of navigation rests upon the navigator of the lead ship in the lead squadron of the group." Sworn statements from each of the officers of Sincock's plane had been obtained ahead of time; in addition, the copilot, the Mickey operator, and the pilotage navigator

took the stand. Each told his story, and each corroborated the testimony of the others. No one asked the copilot why he had not tried to radio the 44th after it so abruptly broke off its bomb run on what was supposed to be Stuttgart. Spirited discussion did arise, however, as to who first suggested that the next city approached was Freiburg. Though the matter was never settled and the H2X officer firmly indicated that he had warned the DR navigator that his own identification was not reliable, assistant defense counsel managed effectively to raise the possibility that it was the Mickey man, not Balides, who made the initial error.

The interrogation of the pilotage navigator involved a complex series of photographs of the bomb drop and maps of both Zurich and Freiburg. At first, the idea appeared incredible, yet defense counsel showed how the two cities could be confused if Zurich were approached from the angle it was and clouds obliterated any view of the lake. The river seen to the west of the city and mistaken for the Rhine was the Limmat. Again and again the defense brought forth that the commanding officer of the ship himself had no view of the target and had to rely upon his navigators.

For a thorough analysis of the DR navigator's log and track chart, the TJA called upon the assistant to the director of intelligence of the Eighth Air Force. An expert navigator who had analyzed over a thousand logs, he gave Balides an average rating. He pointed out that the navigator was operating under some real handicaps:

> In missions of this kind under these weather conditions errors like this have crept in. Very often the Eighth Air Force—in some instances where international boundaries haven't necessarily been involved—we have had occasions not only of squadron lead, but of division lead navigators bombing targets 50 to a thousand miles from the briefed target and not knowing what they had bombed.

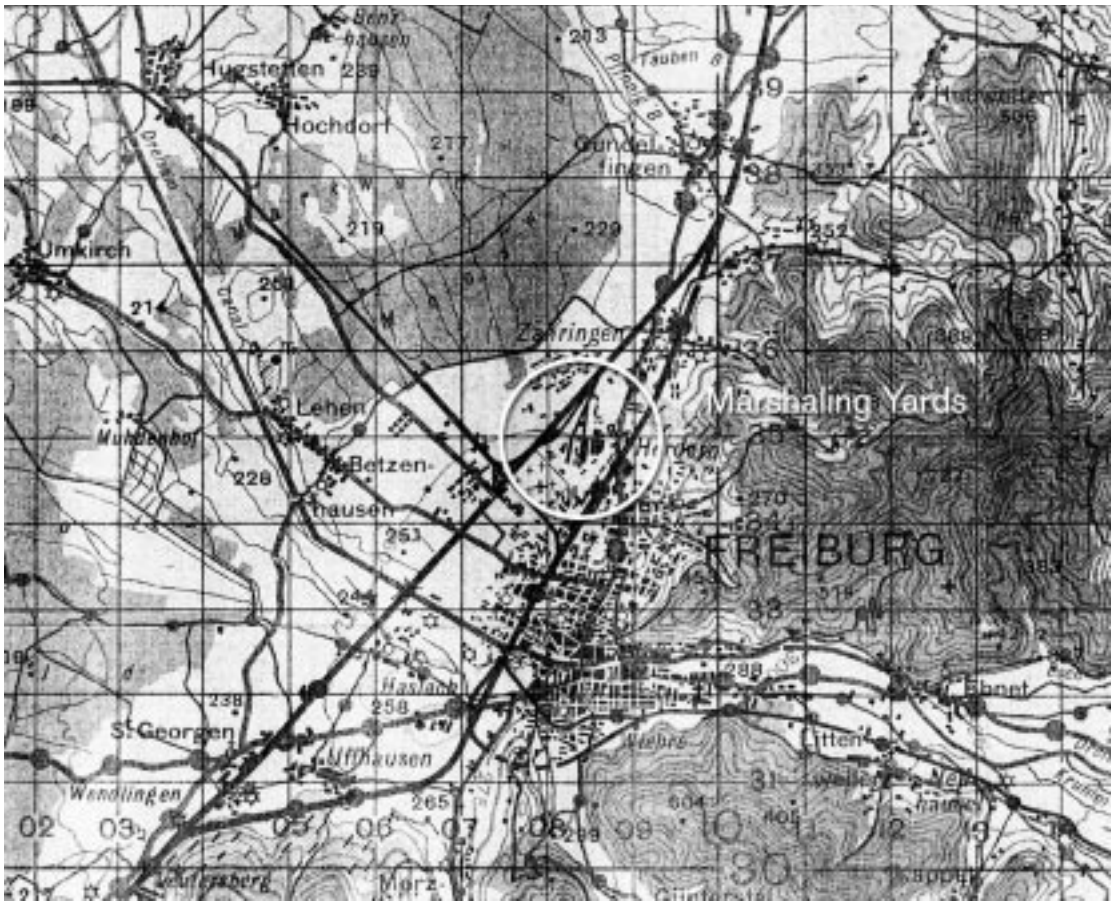
Then, too, there were the Germans. "He [Balides] had a [Gee] box, but in March 1945 the Germans were probably engaged in their most severe counter-measure program and east of the Rhine River 'jamming' was evident."

Much time was spent discussing the transposition of the minutes of the Mickey fix taken near Stuttgart. When pressed, the captain admitted that reversal of minutes was a common error. How easy it was the court recorder inadvertently demonstrated, as in one section of the transcript the minutes were jumbled, reversed in a manner similar to, but different from, the navigator's mistake.

Testimony was rapidly building to the effect that navigational problems were immense on 4 March and that Balides had not been remiss in his duties. But the assistant to the director of intelligence let drop one fact that revealed that it was possible for the navigator to have done a better job than he actually did. While investigating the course of the squadron, the intelligence officer checked the log of the deputy squadron leader who flew on Sincock's right wing. That log showed the deputy navigator's estimates never to be more than five to 10 miles from the actual course flown. He should have realized the squadron was over Switzerland and called his lead. No one asked why he did not, but the answer seems clear. The deputy lead had less confidence in his own navigation, which happened to be correct, than he did in that of the squadron lead. There could be no better testimony to the confusion that reigned that day.

The court adjourned at 2140 and met again the following morning. Only a few more witnesses remained to be heard, including Lt Col Carl C. Barthal, one of the officers charged with investigating the incident and how to prevent its recurrence. He was an expert on radar navigation and had earlier testified regarding the equipment aboard B-24H number 577. Now he stated that having gone over all the reports, he did not know whether the crucial, and transposed, fix was actually taken on Stuttgart. The transposition error accounted for only 25 miles, but 25 miles from where?

> It seems to be a collection of a series of errors, which, normally, negate each other, and in this



Sections from two World War II–era charts comparing Freiburg, Germany (above), *with Zurich, Switzerland* (see next page). *The marshaling yards are more obvious on the Zurich map, but in both cases they were located in the northwest quadrant of the city. The Rhine is just off the west (left) side of the Freiburg map.*

> case, they just backed each other up. After this fix at Stuttgart, which was not picked up at the time it was plotted, from there on out each error tended to build itself up, rather than to take away. . . . I personally think that they—from just what experience I have had—it is just a matter of time and fatigue, strain, things like that. About the transposition of figures—that is purely a matter of taking figures from the chart and going on to the map with them. Now he felt, I am sure, that he was in that area somewhere and the fix fell in the general area.

After a coffee break, the testimony of Col Irvine A. Rendle, the 2d Air Division observer that March day, was read into the record. It was his opinion that the primary cause of the incorrect bombing was the crew's effort to achieve something that, because of complications, was beyond their capabilities. "No matter how thorough the training and efficient the planning, if a unit is pushed far enough, there has to be someone who will break first, even if he is good."

The next testimony heard was a portion of the official report of Brig Gen Leon W. Johnson, commander of the 14th Combat Wing, to the commanding general of the Eighth Air Force, Lt Gen James H. Doolittle. It is worth noting that in August 1943 Johnson had won a rare Medal of Honor in carrying out a dan-

gerous bombing run on Ploesti, Rumania. His conclusion was significant:

> This crew was aware of the fact that our units have repeatedly been dispatched on missions for the disruption of the enemy's communications. They were aware that some recent targets of opportunity bombed have been effective in that direction. The Wing and Group Commanders have repeatedly stressed that a bomb on Germany is a good bomb and that if proper targets can be located they should be bombed rather than returning bombs to base. I believe the aggressiveness displayed by the crew was commendable, as they could have returned with their bomb load, under the weather conditions encountered, and not been criticized.

Neither Sincock nor Balides was required to testify, but both did. The pilot described how his crew came to be over what they thought was Freiburg and how, after that

identification was made, "I told the Bombardier to pick out an M. P. I. and drop his bombs. He did so. We continued on withdrawal course back to our base, reporting on arrival that we had bombed Freiburg, Germany, visually as a target of opportunity."

The defense then put some leading questions.

"Lieutenant, were you reasonably certain when you gave the order for bombs away from the information which had been transmitted to you, that you were over a legitimate target of opportunity?"

"Yes, sir."

"Had you known, Lieutenant, that these bombs were dropping, in fact, over the town of Zurich, rather than the town of Freiburg, would you have given that order?"

"No, sir. Certainly not."

The cross-examination focused on the division of responsibility between the pilot and the crew and on the recognition of key locations. After Stuttgart was presumably identified, did Sincock follow the navigation himself or rely on his navigator?

"I do not navigate the airplane."

"And you were relying entirely on your Navigator?"

"On the three navigators I have aboard. Yes, sir."

"And in that instance, do you rely more on one particular navigator than the other?"

"No, sir. It is the opinion of all the navigators, with the equipment and the facilities they have available to them. When they arrive at a common decision, that decision is the one which I take."

The prosecution then wanted to know if the pilot had a map that showed the terrain features of Freiburg. He did not.

"And when the Mickey Navigator first informed you that a town was coming up as shown on his scope, did he give you any indication of what sort of a place it was, a large town or a small one?"

"He was unable to identify the town through its appearance on the scope, sir. However, he was aware and I was aware that he was picking up only strong returns on his scope, and the town which he picked up as a bright spot would have to be a fairly large town."

"Were you looking for any certain place or did you expect to pick up any town at that point?"

"No, sir. I was particularly anxious to get any target of opportunity. Our Group has heard and I believe it came down from higher headquarters that any objective which gives a return on the Mickeyscope is a good target of opportunity. Since we were getting a return on the Mickeyscope, I decided that it could be used as a target of opportunity, as it had been identified as being inside Germany."

The verdict rendered the afternoon of 2 June by the jury of 12 officers was "not guilty" for each of the defendants. Criminal negligence or intent to do harm to Switzerland had not been established, and even guilt at the level of civil tort had scarcely been shown, save for the error in transposition.

On 30 July, Maj Jack R. Vollertsen, reviewing the case for the adjutant general's office, wrote that

> apparently [the] case was tried in order that record might be available to State Dept. in any future negiations [*sic*] over the incident. Evidence did not disclose such carelessness or negligence on part of accused as would have sustained a conviction and court properly rendered an acquittal.[6]

Some of the previous border bombing incidents may not have seemed to Swiss critics as entirely accidental, but the unintentional errors and navigational mishaps associated with Sincock's and Balides's mission could be, and were, clearly demonstrated in the court-martial.

Though acquitted of charges of willful negligence, Sincock did pay a penalty. He was no longer allowed to hold a lead position, a demotion for which he felt disappointment the rest of his life. Though Sincock's crew was grounded for a period of time, Balides was handpicked for another mission that was so successful the pilot and bombardier were awarded Distinguished Flying Crosses. How-

ever, Balides was denied the medal because of the previous incident.[7]

In a sense, the men's errors stemmed from the very quality that had won them praise and promotion, a quality that the United States highly valued in its fighting men: aggressiveness. Nor had that aggression failed to be linked with an effort to exercise judgment. What confounded the latter were both organizational miscues, such as lack of better information about radio frequencies, and equipment failures. Technology was supposed to give crews the edge to win the air war. Overall, perhaps it did. But at times, too much burden was placed on the capacity of the technology. Initially, human will and skill overcame the problems and enabled the crew to find its group and wing. But when the burden of continuing technological deficiencies coincided with the challenges of bad weather, crew strain, and zealousness to achieve, disaster was the result. Today these factors still apply, despite technological advances such as global-position-indication systems. □

Notes

1. Unless otherwise indicated, all quotations are drawn from the record of trial of Lt William R. Sincock by general court-martial, Horsham St. Faith, England, 1 June 1945. This record is on file at the Washington National Records Center, Suitland, Maryland. Although a matter of public record, it omits the names of all but one of the officers in Lieutenant Sincock's crew in order to protect the privacy of those still living. I am indebted to the late Dr. Sincock for suggesting this topic to me and for providing much information. Allegheny College and the Ford Foundation provided appreciated grants to facilitate this research.

2. See Jonathan E. Helmreich, "The Diplomacy of Apology: United States Bombings of Switzerland during the Second World War," *Air University Review* 28, no. 4 (May–June 1977):19–37.

3. Brig Gen Francis H. Griswold's tactical analysis of the mission of 4 March 1945, Washington National Records Center, Suitland, Maryland, Record Group 18.

4. Author's conversation with Dr. William R. Sincock, 14 November 1969.

5. National Archives, Department of State Records, 411.54 Bombing, Jck. 2, 740.0011 European War 1939/3-745, Lehrs to Grew, 7 March 1945.

6. A copy of this review is included with Sincock's trial file.

7. Michael Ollove, "Wartime Mistake Still Echoes," *Baltimore Sun*, 6 November 1994.

It must be a rare occurrence if a battle is fought without many errors.

—Jefferson Davis