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Summary

Gottfried Mücke, Stuttgart

Dispatching systems for air passengers

(Pages 349–352)

At the end of his article, Gottfried Mücke describes the 5 most important types of dispatching employed at the present time in airports all over the world. These systems, whose advantages and disadvantages the author points out, are as follows: Air-shuttle, Flight check-in, Common check-in, Drive-in, Gate check-in.
Air-shuttle: This system is characterized by the fact that the dispatching of the passenger is done according to the self-service principle. He weighs his baggage himself, gets his boarding-card from a vending machine and pays the price of the air ticket into the machine. The air line guarantees each passenger a seat at the flight hours indicated on the timetable.
Flight check-in: Characterized by a central hall in which are affected all the operations of dispatching for all flights at different windows. Each window serves certain flights and certain air lines.
Common check-in: Similar to the Flight check-in system. However, the windows are utilizable in various ways. The advantage here is flexibility.
Drive-in: In this system the passenger is transported directly to the appropriate dispatching unit.
Gate check-in: System characterized by the central information and distribution zone and by decentralized dispatching units. Each unit comprises a window and a waiting area. These units are directly connected with the planes.

Jean Camoletti and Jean Ellenberger, Geneva

Reception building at the airport of Geneva-Cointrin

(Pages 353–359)

The old Geneva Airport complex went into service in 1949. It had an annual capacity of 300,000 passengers. The actual facts, however, were otherwise: in 1957 there were already 674,000 passengers handled here, and in 1966 there were 1.5 million. The number of landings and take-offs and the movement of air freight at the same registered comparable increases.
For 1970 there is envisaged a volume of 2.2 million passengers to be dispatched at Cointrin. The old terminal building, enlarged in 1958 and 1960, is being assigned new functions owing to the activation of a new construction. As a matter of fact, it is now reserved for processing of air freight and serves operational functions of the airport and is used for air line personnel.
The latter is constructed as an interchange element between the roadway and the runway. It comprises three wings:

- the dispatching zone for passengers, halls for arriving and departing passengers, the baggage and transit service;
- the restaurant and spectator zone, the viewing terraces reserved to the public;
- the service zone comprising technical and service installations.

The architectural envelope of these three zones is made up of the three-part construction: the flight hall wing with dispatching equipment, the service wing situated above and the restaurant wing extending to the side.
In front of the dispatching building, there are three projecting pavilions, known as satellites, where the passengers enter the planes. These satellites are connected to the dispatching building by a system of underpasses equipped in part with escalators.
The whole complex is characterized by a rational division of the movement systems on different levels. Dispersal is reserved for planes, service vehicles and baggage transport. Passengers move about only within a carefully supervised small zone between the satellites and the planes. The gallery bounding the dispersal area and connecting the buildings serves several functions. Still on the dispersal level, there are, below the gallery, several small halls from which passengers have access directly to small planes serving internal traffic requirements. On the lower level, there is situated the connection between these exits and the dispatching hall. On the roadway side of the terminal building there are the zones for arriving and departing passengers likewise arranged on different levels.
Baggage processing is effected in the main terminal building, at dispersal level. In front of the distribution gallery, nine planes can be simultaneously served (loaded, unloaded, fuelled). Moreover, the three satellites in the first construction stage serve 12 to 15 planes. The fourth satellite will be able to hold 4 to 6 planes of the current type or 2 Jumbo Jets. The satellites connected to the underpasses by escalators are steel structures of low silhouette having a circular plan with a diameter of 30 m. They serve passengers passing through and contain technical installations, bars, toilets, etc.

Giefer + Mäckler, Kosina, Frankfurt am Main

The airport of Frankfurt am Main

(Pages 360–363)

This is the third largest airport in Europe and the largest in Germany. Built between the two World Wars, expanded on several occasions, it will soon no longer be able to meet the demands of increased air traffic. The two east-west runway have been extended to 4000 m. Another runway will be constructed in the near future in the north-south direction. The old reception terminal has become too small. At the present time, around 6 million passengers annually are handled here, and it is estimated that there will be 10 million in 1970 and 25 million in 1977.
That is why, in 1965, construction was begun on a new plant 1 km. to the west of the present complex. At the time of the planning of the main building and the dispersal zone, the following conditions had to be taken into account: 50% approximately of the passengers here are in transit only, changing over to internal flights or international flights. There is a total of 50 air lines using this airport, and among them 16 dispatch their passengers themselves.
These conditions require a building whose design permits the parking of a large number of planes close to the terminal so that the route from building to plane is as short as possible. That is why there are 36 plane positions very close to the terminal, and other positions are planned in the dispersal zone for special flights. When the complex was planned, account was taken of the imminent employment of giant planes which will transport more than 400 passengers, with arrangements being made for 20 of these new planes to be positioned close to the terminal building.

Paul Schneider-Esleben, Düsseldorf

Dispatching building at the Cologne-Bonn Airport

(Pages 364–368)

The new airport complex of Cologne-Bonn is based on the "drive-in" system, the first plant of its kind in Europe. The length of the three wings of the pentagonal construction was determined in relation to the envisaged number of cars using the parking zones. These three wings making up the main dispatching building are designed as lofty pyramids.
On the lowest level, the servicing zone situated 5 m. below the dispersal area, there are the technical installations. At the runway level (landings and take-offs), we have the rather spacious arrival floor with all baggage handling facilities.
A long hall connecting the four satellites is built at take-off level, this being above arrival level. This is the passenger information area. From the same level, there is access to the four satellites by means of four connecting corridors. The passengers departing reach the satellite entrances from the take-off level zone. On this level, there are, in the main building, waiting-rooms and service annexes: bank, post office, newsstands, etc.
Passenger dispatching proper is effected in the satellite. Up to that point the passenger carries his own baggage. He then proceeds to the window of his air line, goes through passport inspection and finally arrives at the departure gate, thus entering the plane directly from the waiting-room via a telescoping gangway. Arriving passengers are handled in the same way, and they are fed into the main terminal building by escalator.

Harry Weese & Ass., Chicago

The Overwing Loading System

(Pages 369–373)

This system is adapted to all types of current and future aircraft. It permits simultaneous access to all the doors of the plane. The main part of the system is a projecting waiting-room which can be elevated or lowered to allow passengers to reach all the doors located above the wings on one or on both sides of the plane.
The waiting-room is situated above the wings parallel to the fuselage. It can hold from 250 to 300 persons. One single loading machine is sufficient for all the types of plane known, with the exception of the Jumbo Jet, for which two similar machines will be required. The positioning of the aircraft between two loading machines makes necessary servicing, checking and cleaning from below, a logical procedure and one which will be general in future systems utilized on the ground. The waiting-room can be adjusted at different heights varying between 2.75 and 6 m.
The waiting-room is located between two lateral hanging corridors. The latter are vertically mobile in relation to the floor of the waiting-room and interconnected by means of transverse ramps. One of the two corridors is adjusted at the same height as the floor of the waiting area, the other at plane boarding level, the first being higher than the second.
The lower corridor is coupled with the doors by means of locks. It is first used for disembarkation of passengers. After the coupling of the locks, the passengers leave the plane and reach the satellite via this corridor. Then, the lower corridor is used for entering the plane. In this way, the two passenger movements are rationally separated.
This system is very significant in all airport planning. In the zone close to the satellite, there is no waiting. It is thus possible to use this surface for pedestrians and passenger facilities.

John B. Parking Associates, Toronto

Station in Ottawa

(Pages 774–377)

Within the scope of the reorganization plan for the centre of Ottawa, part of the interchange element between individual traffic (highways) and mass traffic ration Square transformed to accommodate new functions. The new building has an advantageous situation from the standpoint of traffic, since it is located 3.5 km. from the city centre.

This station could be defined as being the interchange element between individual traffic (highways) and mass traffic (railways). In fact, the traveller leaves his car and reaches the hall via the covered entrance. He then passes the ticket windows located in the middle of the hall and then enters the underpass beneath the tracks via a spiral ramp or escalators. This ramp and these escalators give direct access to the tracks.

At its two ends, the hall is flanked by wings which accommodate the administration and the various services, café, bar, restaurant, newsstands, etc. and also the office facilities with personnel rooms, the left luggage office and the baggage dispatching room. These zones extend longitudinally in relation to the hall and are partly under cover.

The roof of the hall rests, at a height of 10 m., on eight cruciform supports. It measures around 45 m. in width and 100 m. in length. The supporting apparatus consists of two grids of superimposed trellises. The basic structure consists of four pillars placed longitudinally and tied in with six transverse struts. The primary pillars located at a height of 4.5 m. project around 9 m. beyond the supports. This entire construction is made up of steel sections welded together in the shape of a coffer. A glazed partition separates the hall from the covered public areas.

Schönbühl Shopping Center and high-rise apartment house, Lucerne

(Pages 378–384)

A) The high-rise apartment house by Alvar Aalto, Helsinki.

The organization of the plan is based on the following considerations: It was necessary to concentrate as many apartments as possible on one floor and to have a varied apartment size in order to guarantee flexibility of utilization. It was also desired to use lifts as much as possible. Moreover, the fan shape reduces horizontal routes to a minimum. There is a clear distinction between the living zones of the apartments and the bedroom zones; the technical installations are grouped around a well, and there are large balconies everywhere.

B) The shopping center by Alfred Roth, Zurich.

The complex is located on a site on the eastern periphery of Lucerne, near the lake. It is designed to accommodate around three thousand residents.

The shopping center will probably draw customers from the city and its suburbs. The total utilizable surface at store level is 5,500 sq.m. The roof terrace also serves for parking. The stores have three entrances, they have artificial illumination and are completely air-conditioned. In the centre, there is the "piazza", on which stands a hall two floors high with natural daylight. The lifts and stairs situated in this hall afford communications between the store and the roof parking branch of the Cantonal Bank of Lucerne, zone as well as the basement car park.

The ground floor accommodates a 3 big food stores, other stores and fashion shops, a post office, on the "piazza" a newsstand and a cafeteria. At basement level, we have garages, stock rooms for the stores, shelters, ventilation plant, etc. The roof terrace is furnished with ramps and can accomodate 100 cars.

The building has a steel frame structure with concrete piling.