

Teamwork in an Airlines Operations Room

Job: Baggage Service Planner

Background: Chris works in "ops", the operations room of Atlantic Airlines in a busy metropolitan airport in the Western United States. "Ops" is a communications and control center which is in charge of coordinating all activities having to do with the arrival and departure of Atlantic planes. This airport is a hub for Atlantic Airlines, and most passengers who arrive here have to make connections. Several times during the day, a flock of AA planes from all corners of the country descend from the air, roll into the eight gates, exchange passengers, baggage, and crews, are serviced with fuel and food, and go out again to different destinations. Chris sometimes thinks of the ops room and the areas associated with it (the ramp, the gate, the baggage area etc.) as a pulsing organism which periodically sucks in planes, people and objects, takes a deep breath, and then expels them again - hopefully on schedule. These periods of heightened activity, each lasting about an hour, are called "complexes."

Tonight, Chris is working with four other people in the ops room: Victor, the supervisor; Dave, the Passenger Service Planner, who is in charge of communication with gate agents; Kendon, OPS-A, who talks to jet pilots, either by voice or through an onboard computer; and Rob, OPS-B, whose duties involve communication with the pilots of Atlantic Hawks, the airlines's small commuter planes.

Chris is the Baggage Planner in the ops room. Her duties center around maintaining the vital link between the ops room and "the ramp", where the ground crew stands ready to service the airplane and take care of the all-important baggage transfers. Before she bid into the ops room (this is a union job and seniority counts), Chris herself worked on the ramp. She had started there several years ago as a baggage handler, had become a baggage transfer driver, then a crew chief on the ramp. This experience is invaluable to her in her present position.

In the ops room, Chris and her colleagues are seated back-to-back, facing the various communication technologies arranged along the walls: computer terminals, radios, phones, flight information displays (FIDs), and the like. Information about the next batch of planes comes in over radios, phones, computer screens, printers, and video monitors. It is taken in, processed, and then sent out again in the form of directives to other parts of the system (i.e., pilots, fuelers, baggage loaders, maintenance people, etc.). The place is noisy, with phones ringing, printers starting up, and radios squawking; the radio channel for Tower and Ground Control are on much of the time, which exposes ops workers to a constant barrage of directives to planes approaching, landing, on the ground, etc. Of great help to Chris and her colleagues is the fact that they can "look at" the gates where planes arrive. A video camera is mounted at each gate facing the incoming plane. This camera can be controlled from the ops room, so that operators can zoom in on a particular plane to check how far along it is in the boarding process. A bank of eight video monitors, corresponding to the eight gates, is mounted high up on the back wall of the ops room.

Action: So far, the second shift has been pretty ordinary but they have all been briefed by the supervisor that a plane switch has to be made during the next complex. Aircraft #677 coming in from Seattle and scheduled to go on to Santa Ana has developed a problem with one of its fuel tanks. The repair shop that specializes in this type of repair happens to be in Los Angeles. So, during complex 8, aircraft 677 will switch destinations with aircraft 676, which comes in from Reno at roughly the same time with destination Los Angeles. As complex seven wraps up, Chris and her colleagues begin to focus on the upcoming swap.

To get the situation clear in her mind and to help her decide what she needs to do, Chris makes the following note for herself:

Gate 14: aircraft #676

SKED: 1091 from RNO to LAX
TODAY: 1091 from RNO -> 1018 to SNA

Gate 15: aircraft #677

SKED: 1018 from SEA to SNA
TODAY: 1018 from SEA -> 1091 to LAX

She circles gate 14 and gate 15. Obviously, she has to communicate with the crew chiefs at these gates to make sure that they are aware of the planned changes. In an ideal world, they would have consulted their computers but she knows from experience that things often get hectic on the ramp. She figures she'd better make sure nothing will fall between the cracks. If you "ramp rats" weren't ready, there might be a delay in getting these planes out and that would be a delay counted against them in their performance rating. This would be reflected in their bonuses but maybe more importantly, it would be a black mark on their excellent record.

Chris picks up the radio: "Ops to gate 15"; "ops to gate 15, come in please." A voice comes over the radio. It is Redge, the crew chief at gate 15. "Go ahead, ops." Chris explains that the aircraft for 1018 today will "take out" 1091 to Los Angeles because of a problem in the fuel tanks. "So, please, let your transfer drivers know." Obviously, it wouldn't do to have the Santa Ana baggage show up in Los Angeles.

While she makes sure that the ramp personnel at both gates are properly informed and prepared, she also, almost unconsciously, listens for other relevant information in the babble of noises that fills the room. Dave is updating the "leads" at both gates about the impending swap. Rob is placing a food order for one of tomorrow's flights, and Kendon is talking on the radio. Her phone rings. She hears the beginning of a Tower communication about flight 1018 but picks up the phone. It's Grosso, one of the transfer drivers for tomorrow morning shift who wants to switch places with a friend on the afternoon shift. Chris says: "that's fine" and makes the requested changes on her record sheet. Keeping the ramp crew records is one of the duties that comes with the job.

Meanwhile, Kendon, raising his voice slightly, and half turning his head into the room announces: "108 is on the ground." She knows this is information he picked up from listening to the Tower and Ground Control. She picks up her radio and, with an intonation that sets this communication off from others, announces to the ramp: "1018 is on the ground for gate fifteen." She knows that the ramp crew at gate 15 are getting ready to roll out the stairs, that the baggage driver is ready to collect the bags coming off the plane, distribute them to the appropriate gates for their connections and load on the baggage going to LAX. She enters the plane's touch-down time on her complex sheet, a matrix listing incoming against outgoing flights that shows how many bags from each incoming flight have to be transferred to the various outgoing flights.

Dave, who has put on a headset to cut down on some of the noise in the room, has been talking on the radio. Now he turns to face the room and says: "1091 was 16 minutes late out of Reno; he's trying to catch up some but it'll be tight." Chris knows that to switch passengers, crews and baggage between the two planes and have them both leave on schedule will require good planning and quick work by everybody. She turns to the supervisor: "Victor, do you think we could give 1091 an extra set of stairs?" Victor thinks that's a good idea. So Chris calls the crew chief at gate 14 and asks him to have rear stairs ready for 1091. Dave, who had been listening, picks up his phone at the same time to call the lead gate agent at gate 14. They will use the rear stairs to board outgoing passengers while the arriving passengers disembark via the front stairs, a procedure that substantially speeds up the turnaround time for the plane.

Chris gets up from her workstation and walks over to the camera controls at the opposite wall. Looking at the monitors for gate 14 and 15, she manipulates the camera controls. Gate 14 is empty. At gate 15, she sees the Marriott truck in place but the fuel truck has already pulled away. So they are making good progress.

While she's standing there, Rob asks her: "Hey, Chris, can you see how many Hawks are out there?" The Hawks, the airlines small commuter planes, are parked at the most distant gate and are often hard to see. Chris focuses the camera and tells Rob that the gate is still empty but it looks like one is taxiing in.

Commentary: Chris likes to think of the whole ops room crew as constantly working on updating their collective take on the current state of the world. Everyone is working on what "the picture" is, i.e. engaged in absorbing and in turn making available to co-workers information about the current situation. That is why people in the ops room are constantly engaged in monitoring each other's information needs. They ask each other for help, they offer assistance, and they provide others with whatever pieces of information they pick up. Much of the information the ops room works with is relevant to different operators for different reasons. For example, the delay of one plane may pull in its wake disturbances in the departure of others and it is extremely important that information about changes be available to everybody who is involved in shaping the directives that go out of the room.

Skills Demonstrated

Resource Management:

Time: is alert to time-sensitivity of required actions;

Material: schedules appropriate technology;

Human: involves people in and outside her immediate work environment to get job done

Information Management:

Identifies salient information as it comes in through voice (phone and radio) or computer against a noisy background;

Appropriately "packages" information for co-workers in ops and on the ramp; is able to project herself into their position sufficiently to do so;

Translates video, auditory and electronic information into other modalities;

Understands and fills out complex paper forms.

Social Interaction:

Participates and identifies as team member;

Orients to and is responsive to others' information needs;

Is able to take initiative and make suggestions to co-workers, including supervisor.

Understanding Systems Behavior and Performance and Interaction with Technology:

Understands the ways in which the ops room is tied to its associated locales, i.e. the ramp area, the gate area, ticket counters, pilots, maintenance, etc.;

Understands information needs of different parts of the system; pilots, ramp, gate agents;

Is able to communicate through appropriate technologies with remote parts of the system: video, radio, phone, paper documents, computer;

Monitors consequences of directive sequences as they propagate out of ops room into other parts of the system;

Takes action to increase efficiency of the entire system.

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