

ascend

Taking your airline to new heights

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ARRIVAL

आगमन

TIME	FROM	FLIGHTNO	REMARKS
07:45	KOLKATA	AIR DECCAN DN 633	DELAYED
07:50	HYDERABAD	AIR DECCAN DN 607	DELAYED
07:55	MUMBAI	INDIAN AIRLINES IC 611	DELAYED
08:20	BANGALORE	AIR DECCAN DN 601	DELAYED
08:25	MUMBAI	KINGFISHER IT 301	DELAYED
08:30	KOLKATA	SAHARA S2 203	DELAYED
08:35	CHENNAI	AIR DECCAN DN 609	DELAYED
08:35	LUCKNOW	SAHARA S2 38	DELAYED
08:40	KOLKATA	JET AIRWAYS 9121	DELAYED

Photo by Kamal Narang/The Hindu

Full Recovery

■ By Michael Clarke
Ascend Contributor

Through the use of integrated, advanced decision-support systems, Jet Airways can quickly and effectively overcome unexpected schedule disruptions.

Airline flight schedules and operations are susceptible to unexpected disruptions that result from crew shortages, severe weather patterns, system congestion and aircraft failures. These problems are exacerbated in emerging countries with still-developing airport and air traffic control systems that are straining to support airline traffic levels. The phenomenal growth of airline passenger traffic and aircraft movements in the Indian sub-continent as a result of deregulation is a case in point.

Since 1990, India's domestic airline industry has experienced more than 100 percent growth in aircraft movements, with more than 10 new airlines starting or planning to start operations in an already congested environment. On the international front, the signing of more liberal bilateral agreements, as well as open-skies agreements, has resulted in impressive growth of scheduled operations. At the same time, there have not been any significant improvements or expansion of airport facilities. (See related article on page 40.)

Even before this massive growth in commercial air traffic, Indian airlines were exposed to restrictive operations as it is a

well-known fact that airport and air traffic control facilities in the country are barely able to support commercial airline operations. In addition, most major airport facilities share airside and air traffic control services with the military. In many situations, major commercial airports will temporarily close to support military activities and/or training. This usually happens on short notice, severely impacting an airline's planned operations. Also, government regulations require scheduled airlines to maintain air services to secondary markets proportional to the level of service offered in major markets (such as Mumbai, Delhi, Bangalore, Chennai, Kolkata).

Like most operating environments, the Indian domestic airline market is often prone to disruptive weather patterns. During December through February, airports in cities such as Delhi are closed for periods of up to five hours due to early morning and late evening fog. This has a significant impact on the daily operations of scheduled carriers. Airports are sometimes closed for several days due to extremely heavy rains during the monsoon season. Last August, both the international and domestic airports in Mumbai (the financial center and major gateway city) were closed for runway flooding. Granted, they both share the same runways, along with the military base. Once the airports





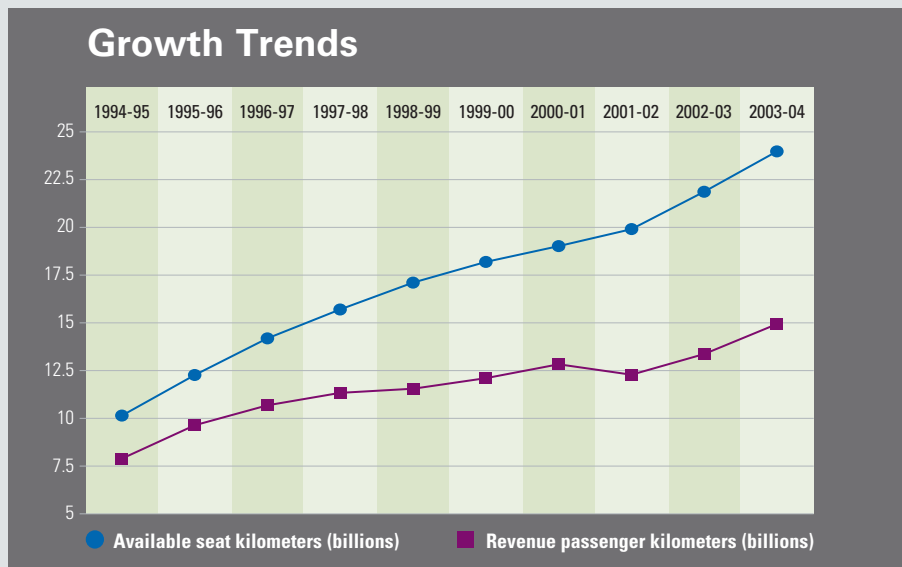
re-opened, scheduled carriers were forced by the government to reduce their operations by 30 percent for three subsequent days.

Working under such demanding conditions, Jet Airways elected to acquire *Sabre® Decision Manager*, an innovative tool within the *Sabre® AirOps™ Suite*. *Decision Manager* is a fully functional decision-support system developed for airline schedule recovery. The system currently considers aircraft maintenance routings, crew connection assignments, passenger origin-and-destination itineraries, operational constraints (air traffic slots, airport slots, curfews, gates, weather alerts), and relevant market considerations (coverage, revenue, equipment requirements). Jet Airways is currently in the process of implementing *Decision Manager* to deploy it in conjunction with *Sabre® Movement Manager*, another system within the *AirOps* suite. *Decision Manager* has been developed to seamlessly integrate with *Movement Manager* as well as the *Sabre® FliteTrac®* system.

An effective schedule recovery system has to consider aircraft maintenance, crew scheduling, passenger itinerary, airport resource allocation and network operational constraints to accurately account for typical decision making within an airline. Decisions on whether to cancel or delay a scheduled flight have to be based on the bottom-line benefit to the airline. It's not just important to consider the number of passengers on the aircraft, but also what revenue contribution comes from the flight. In addition, an airline controller has to consider all possible solution options including potential equipment substitutions and dynamic flight schedule adjustments. Such decision-making procedures require timely access to passenger itinerary data in conjunction with aircraft and crew assignments.

Since *Decision Manager* derives all the requirement data and information directly from the centralized flight operations database, suggestions proposed by the system will adhere to prevailing operating conditions and restrictions. For example, if a particular airport is unable to support operations of a specific type of aircraft, *Decision Manager* will not assign this aircraft type to operate into the given airport. Of course, the solution generated by the decision-support system will depend on the integrity and accuracy of the data stored in the centralized database. If an aircraft's minimum equipment list is not updated after a scheduled maintenance event, *Decision Manager* may inadvertently prevent the aircraft from being assigned to a specific flight with special operational requirements. As such, the successful deployment of *Decision Manager* will dictate a well-established data management procedure. One of the benefits of implementing a decision-support system such as *Decision Manager* is establishing consistent decision making across the airline. In many cases, indi-

Indian Scheduled Domestic Airline Industry



After the downturn of the industry in 2000/2001, the domestic India air transportation industry is displaying significant growth in terms of aircraft in operation, number of passengers carried, number of available seat kilometers and revenue passenger kilometers. Such growth is putting a strain on infrastructure, which can further complicate efforts to recover from schedule disruptions.

vidual airline controllers make split decisions that have a significant impact on the carrier's profitability. By standardizing the decision-making process, managers can be confident that the optimum decision has been made based on suggestions provided by *Decision Manager*. Decisions made that consider all aspects of the airline's operations (resources, costs and revenue) will ensure that the airline is always focused on the bottom line. In addition, the ability to make quick yet accurate operations

decisions will enable Jet Airways to maintain its competitive market position as India's leading carrier. For carriers in rapid growth mode such as Jet Airways, having a scalable decision-support tool in place will support smooth operations even in uncharted skies. **F**

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