

Setting the standards in ground handling

TOSS



Integrated Ground Handling System

 **KOREA AIRPORT SERVICE**
KOREAN AIR GROUP

What is TOSS?

- Total Operation Support System, TOSS is an integrated ground handling operation system. It monitors the entire ground handling processes including un/loading, baggage handling, cabin cleaning, de-icing, towing, catering, refueling, potable water service and so on.
- TOSS is equipped with real-time flight information, planning, operation control & monitoring, performance analysis functions.
- Thanks to the Mobile TOSS system, an advanced communication tool for mobile phones, more accurate and swift real-time communication between TOSS and ground handlers at the ramp side can be achieved. With the Mobile TOSS system, each of parties involved in ground handling can share information on the progresses and handling at the right time and right place.

What are the key advantages?



- It enhances productivity by enabling you to manage your resources more efficiently.
- It simplifies procedures by enabling you to use your resources for more urgent purposes.
- It reduces the risk of human errors and ensures that everyone involved has all the necessary information.
- It satisfies your customer carriers. By sharing ground handling information in real-time with your customer carriers, it facilitates communication between you and your customers.



How does it work?

The handling information gathered from external sources including Incheon International Airport Corporation (IIAC) and customer carriers is modified to a user-friendly format. The modified information is presented on the personal computer monitors of users in real-time.

TOSS

- Flight / Location Information
- Loading / Unloading Worksheet
 - Fueling Worksheet
 - Aircraft Towing Order

Interface

Customer Carriers

- Seasonal Flight Schedule / Actual Flight Schedule
- Estimated Time of Arrival, Container Pallet Message
- Load Distribution Message, Load Plan
- Fuel Order

IIAC

- Seasonal Flight Schedule / Actual Flight Schedule
- Estimated Time of Arrival / Estimated Time of Departure
- Take Off / Landing Information
- Spot / Gate Allocation
- Baggage Belt / Lateral and Time

Based on the accumulated data in TOSS including flight schedule, human resources & equipment information and service level agreement, TOSS can devise a mid-term human resources operation plan and assign and schedule the ground handling staff in a more streamlined manner.

Manpower / Ground Support Equipment Planning & Staff Scheduling

- Long-term / Short-term Planning
 - "What if" Scenarios
- Optimal Shift Pattern Generation

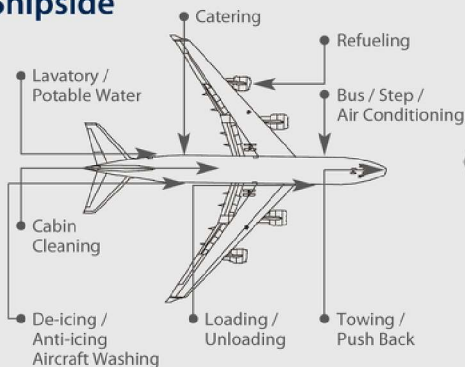
Optimal Algorithm

Flight Schedule
Manpower
Ground Support Equipment
Service Standard
Other Working Conditions

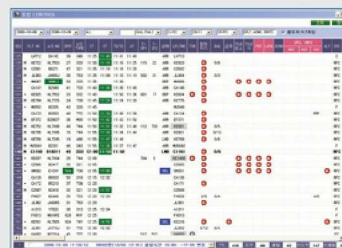


Introduced on June 1, 2011, Mobile TOSS sends out ground handling information to the mobile devices of ground handlers, thereby enabling the main office to monitor all the ground handling workers concerned live.

Shipside



Control Center



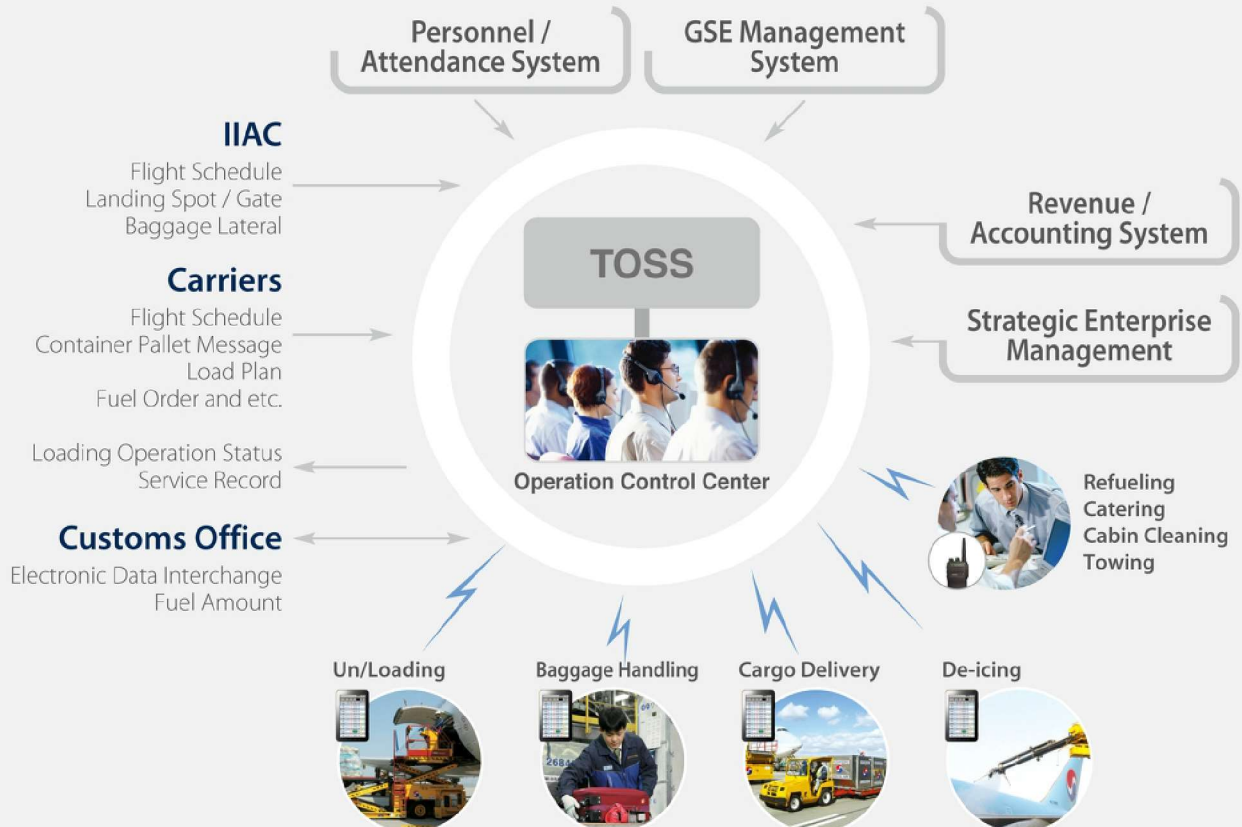
- Flight Information
- Worksheet Issue
- Alarm & Alert
- Assigning Job Duties
- Status Monitoring
- Operation Control

TOSS provides you with the overall performance result analysis based on the accumulated data such as airline frequency results and individual operation histories of GSE and ground handling workers. TOSS serves as a service counter, sharing the necessary data with customer carriers.



Interactive Work Flow?

TOSS and its sub system, Mobile TOSS, receive and analyze the important ground handling information. TOSS can control all the ground handling processes live and is mobile enabled.



Key Functions and Benefits

Process	Functions	Benefits
Planning	Estimates the demand for human resources and Ground Support Equipment based on ground handling information such as flight schedule.	Ensures that various human resources and Ground Support Equipment operation simulation are available through the use of collected data.
Staff Scheduling	Quickly devises the ground workers' work schedule by taking account of the flight schedule.	Reduces the effort and time needed for manual scheduling.
Flight Schedule Management	Provides real-time updates on either seasonal or daily flight schedule.	Ensures that the persons concerned receive all the necessary information in a timely manner.
Flight Schedule Display	On-line screen display of updated ground handling information including flight status and spot.	Advanced visibility allows the ground workers to better understand the progress of ground handling.
Assigning Duties	Assigns duties to ground handling workers based on the flight schedule and individual work schedule of ground handling workers.	Reduces the time required for job assignment and ensures that the coordinator can swiftly respond to the change of flight schedule.
Message Interface	Stores the important handling information received through a conventional method such as Telex in a database format.	Enables efficient saving and exploitation of the accumulated data.
Work Order	Visualizes work orders such as Container Pallet Message, Load Distribution Message in more user-friendly format.	Reduces the risk of human errors by facilitating the understanding of ground handling information.
Mobile System (Mobile TOSS)	Facilitates the exchange of the necessary ground handling information between the operation control center and ground handling workers on site in real-time.	Replaces the conventional type of communication tool with an advanced method and makes each procedures much easier and more reliable.
Monitoring & Alert	Visualizes the ground handling procedures and gives 'Alert' signal in case of potential delay.	Eliminates the potential for ground handling delay by thoroughly monitoring the entire ground handling processes.
Statistics & Customer Service	Calculating the revenue, turnover and ground handling results and sharing the data with customers on the internet.	Reduces time needed for data analysis and ensures customer satisfaction.

