A SYSTEM Solution
EWG, Ga Tech

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Today’s State
Non-Centric Ops

EWR
• COA Ramp Tower
• Port Ramp Tower
• 3 separate functions controlling push back
• FedEx Ramp Control
Today’s State
Non-Centric Ops

ATL
- Ramp Tower Delta
- Ramp Tower TBI
- Ramp Tower TBI Delta has Flt Coor.
in all three locations
The Demarcation Zones of Information
System Approach to System Issues

CAPACITY CAPTURING = EARNINGS & -

SILOS of INFO = EARNINGS + more

Result in less Capacity
Multitude of Inputs to Command & Control

Where is the airplane?
What is it’s state/intention?
When will it be where it’s going?

- Elem Mode-S
- Gate Manager
- De-Ice Status
- ADS-B
- Enhanced Mode-S
- ASDE-X
- ASDE-3
- Dept Readiness
- ETMS
- Various GPS
- SMA
- ACARS
- TFM (EDCT’s)
- STAReS
- Scratch pad
- Aircraft Mx
- TMA
- OOOI
Multitude of Inputs to Command & Control

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- OOOI
- Dept Readiness
- ASDE-3
- Various GPS
- ACARS
Surveillance into SMS/SDSS

ASDE-X
To 17 nm

ASDI
Beyond 45-50 nm

SMA
To 45-50 nm

ASDI
1+ min update

SMA
7-10 sec update

Prediction Latency Issues

TMA Solution

ADS-B

GPS
(vehicles)
Multitude of Inputs to Command & Control

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### SMS Inputs
- Elem Mode-S
- ADS-B
- Enhanced Mode-S
- De-Ice Status
- ASDE-X
- ASDE-3
- Gate Manager
- ETMS
- SMA
- Various GPS
- Aircraft Mx
- ACARS
- TMA
- Scratch pad
- TFM (EDCT’s)
- OOOI
An Uncoordinated Action

In-range/Gate Assignment

TOD

Airline Ops

Gate and GP

ETA and ops info

No Coordination

Ramp Tower

ATC Terminal Area
Rwy/Apch assignment
An Uncoordinated Action
In-range/Gate Assignment

Spacing decisions

Speed control

Fix balancing & metering

Vectors to approach

No Coordination

Airline Ops

Ramp Tower

ATC Terminal Area
Rwy/Apch assignment

No Coordination
Can Be a Coordinated Action

In-range/Gate Assignment

TOD

Spacing decisions

Speed control

SMS coordinates a gate/ramp assignment relative to landing runway

TMA Rwy Assignment

Fix balancing & metering

TMA

Airline Ops

SMS

GATE

ATC Terminal Area
Rwy/Apch assignment

Ramp Tower
Other Examples of Uncoordinated Actions

- De-ice
- Push backs relative to ATM
  - ESP sequencing
  - Departure direction sequencing
  - AFP/EDCT Compliance
- Penalty box usage
- Airport construction
- Airport coordinated push backs
THANK YOU
for helping to ensure this is NOT the future!

QUESTIONS?