



2018
READY FOR
THE FUTURE?

31ST ULDCARE ANNUAL CONFERENCE

New Solutions for Old Problems





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Transfer of ULD assets- a very old problem

RECOMMENDED that, when a unit load device (ULD), loaded or empty, is transferred, the Transferring Party shall provide the Receiving Party a receipt (in paper or electronic form) for the transferred unit(s).

When a receipt in paper form is used, the ULD Control Receipt as shown in Attachment 'A' hereto shall be used. The Transferring Party shall be entitled to a confirmation from the Receiving Party and the Receiving Party shall, once verified, countersign the ULD Control Receipt

ADDRESS			COPY TO							
[][][]			[][][] <=							
ORIGINATOR			<= AIRLINE NAME AND LOGO							
L U C <=			ULD CONTROL RECEIPT							
ATA ID CODE			DATE OF TRANSFER		TIME LOCAL	RECEIVED BY				
TYPE CODE	SERIAL NO.	OWNER	DAY	MONTH	YEAR	24 HR CLOCK	[][][]			
0	[][]	[][]	[][]	[][]	[][]	[][]	[][][]			
1	[][]	[][]	[][]	[][]	[][]	[][]	[][][]			
2	[][]	[][]	[][]	[][]	[][]	[][]	[][][]			
3	[][]	[][]	[][]	[][]	[][]	[][]	[][][]			
4	[][]	[][]	[][]	[][]	[][]	[][]	[][][]			
5	[][]	[][]	[][]	[][]	[][]	[][]	[][][]			
TRANSFERRED BY			TRANSFER POINT							
[][][]			[][][]							
REMARKS			CONTROL RECEIPT NUMBER				FINAL DESTINATION	CONDITION CODE		
[][][]			---	0	[][]	[][]	[][]	[][]	[][]	
			---	1	[][]	[][]	[][]	[][]	[][]	
			---	2	[][]	[][]	[][]	[][]	[][]	[][]
			---	3	[][]	[][]	[][]	[][]	[][]	[][]
			---	4	[][]	[][]	[][]	[][]	[][]	[][]
			---	5	[][]	[][]	[][]	[][]	[][]	[][]
			CONDITION CODE KEY		Serviceable _____ SER		Incomplete/Damaged _____ DAM			



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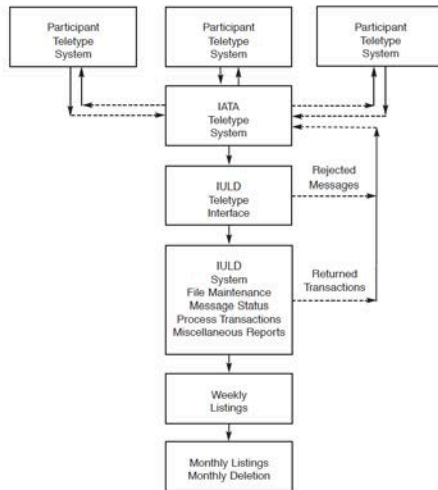
What's holding us back?



Interline ULD Control System Overview

SYSTEM OVERVIEW

Below is a flow diagram generally illustrating the IULD tracking system.



LEGACY PROTOCOLS AND SYSTEMS

10.4.2 Typical MUC Message

Example:

```
QU YMQFFXB
.HDQWAF 141532
MUC
SEQ123
PAP9026AF/26JUL1999/0930/JL/AF/HND/057 21418/CDG/SER
PAP8646AF/27JUL1999/1200/AZ/AF/LIN/057 26803/LIN/SER
AAN0530CO/28JUL1999/0030/CO/AF/ORD/057 39150/ORD/DAM
P1P2418FM/30JUL1999/1005/FM/AF/TYO/057 21419/TYO/DAM
TTL004
```

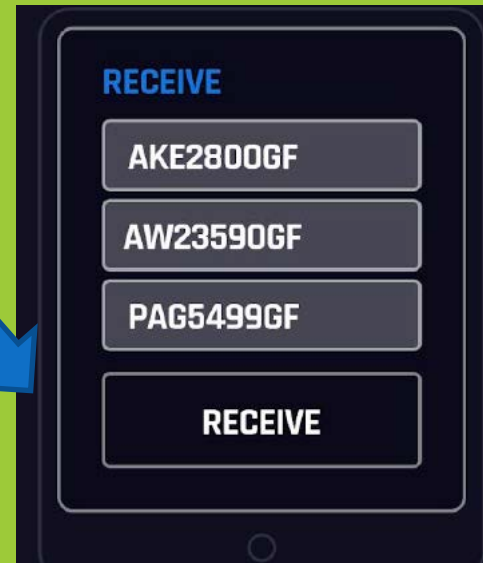
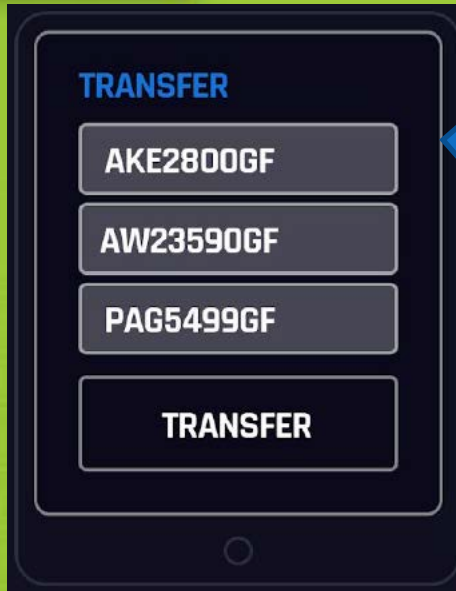


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U.L.D. CARES

CODE
CONDUCT

Are you ready for the future of ULD asset management?





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IULD INC. 1998


CODE
OF CONDUCT

Current status

- IULDUG 40+ years old
- Upgraded around 2007
 - Transitioned from paper print outs to online
 - Removed from IATA mainframe to independent server
 - Remains under service contract with Unilode
 - Process around 35000 transactions per year



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IATA.ENC.FIFILE


CODE
CONDUCT



ULD Control Manual

7th Edition
Effective 1 March 2000

International Air Transport Association
Montreal — Geneva

Legacy

```
QU YMQFFXB  
.HDQWAF 141532  
MUC  
SEQ123  
PAP9026AF/26JUL1999/0930/JL/AF/HND/057 21418/CDG/SER  
PAP8646AF/27JUL1999/1200/AZ/AF/LIN/057 26803/LIN/SER  
AAN0530CO/28JUL1999/0030/CO/AF/ORD/057 39150/ORD/DAM  
P1P2418FM/30JUL1999/1005/FM/AF/TYO/057 21419/TYO/DAM  
TTL004
```



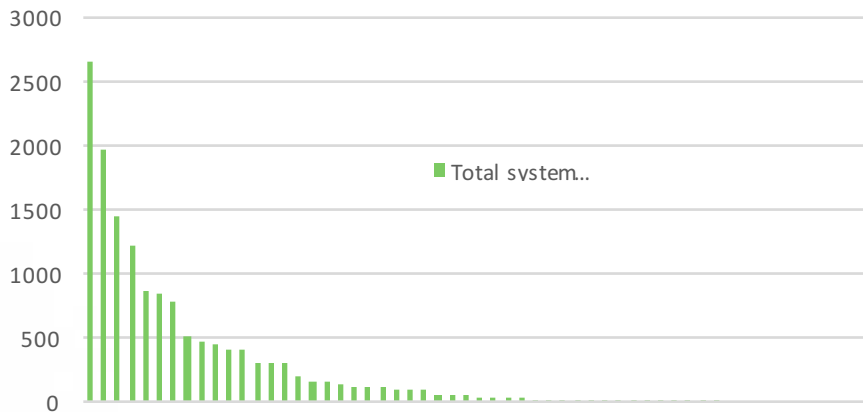
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7
IULDUG

CODE
CONDUCT

System use by carrier HI 2018

IULDUG usage distribution





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7
L.L. EX. FIFTE

CODE
CONDUCT

About 50% of transactions not routine

CARRIER	RELIEVED BY SELF	RELIEVED BY ANOTHER	OF ANOTHER RELIEVED BY YOU (NON- CHARGEABLE)	SPECIAL CODE	TOTAL ACCEPTED
Totals	6440	7842	8073	366	14648



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IATA. THE FUTURE.


CODE
CONDUCT

40 years on

- Maybe 90% of ULD transfers conducted outside the scope of IULDUG
- ULD “discipline” almost non-existent
- Multiple parties handling ULD assets with extremely low control
- Use of IATA ULD Control Receipt become “optional”, no consequence for failure to follow IATA procedures.



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IULDUG


CODE
CONDUCT

IULDUG Evolution

Function	1970-2008	2008-2018	Future
Physical Recording	Paper UCR	Paper UCR	Smart phone APP with terminal input as option
System Input	SITA MUC messages	SITA & Email MUC messages	Data feed
Processor	Main frame	Server	Cloud
System Output	Paper print outs	On line	On line and data feed



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7
LUL EXC FIFTE

CODE
CONDUCT

ULD Control Manual Procedure

10.3.1 Carrier/Participant Field Office Procedures

When transferring a Unit Load Device (ULD) to another carrier or participant, the following action should be taken:

- (a) complete a ULD Control Receipt as per Recommended Practice 1654 (see Chapter 6);
- (b) forward original (white) copy to your Head Office ULD Control Centre;
- (c) provide receiving carrier/participant with a copy (green) of the Control Receipt;
- (d) retain a copy (pink) on the Field Office file;

in order to expedite the input of information to the Head Office ULD Control Centre, it is recommended that Field Offices, in addition to forwarding the white copies of completed Control Receipts, also send an LUC message for each completed Control Receipt, on a daily basis.



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ULC INC. PAPER

CODE
CONDUCT

AHM 422 Control of Transferred Unit Load Devices

“PARTY”. Any company involved in the movement and transfer of ULDs, including but not limited to, be an airline, ground handler, ramp handler, leasing or pooling company, land-based transport company.

“RECEIVING PARTY”. A party that receives an aircraft ULD from a transferring carrier at a transfer point.

“TRANSFERRING PARTY”. A party that transfers an aircraft ULD to a receiving party at a transfer point. The “Carrier” and “Handling Company” shall be as identified in the Ground Handling Agreements.

“TRANSFER”. The transfer of cargo or baggage or mail under the terms of an IATA Interline Traffic Agreement from one carrier to another, irrespective of whether either carrier has appointed a handling company to act on its behalf. Transfers made by or to handling companies will be considered to be transfers by the carriers for the purposes of completing control receipts.



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IULDUG
INSTITUTO ULBRA

CODE
CONDUCT

IULDUG evolution





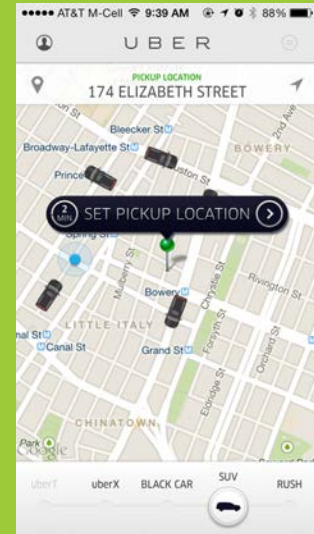
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Solution Delivery



OR



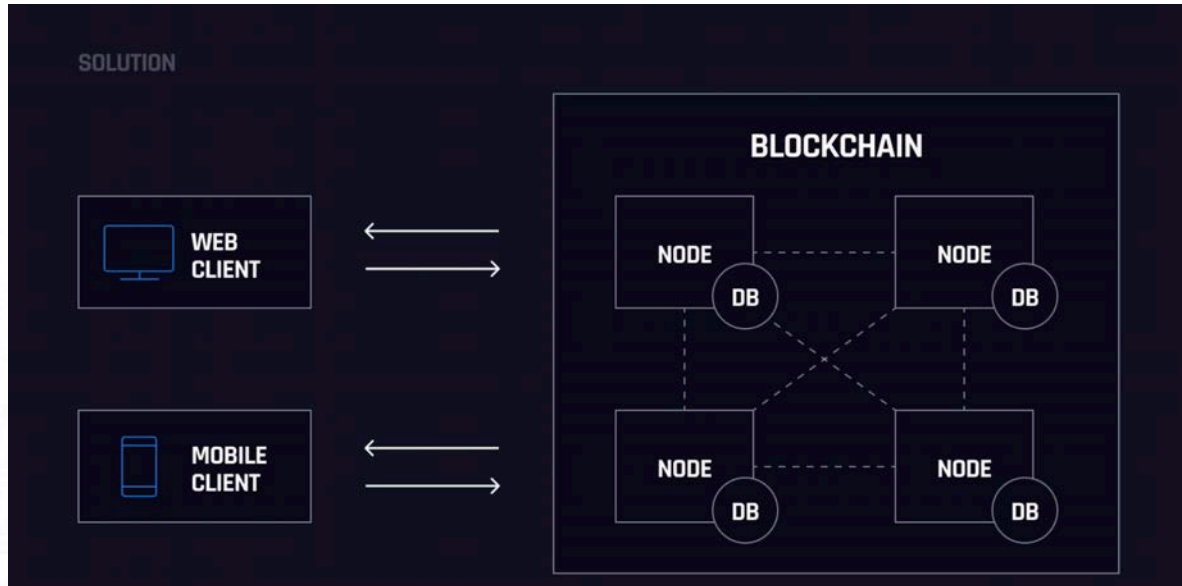


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7
LIFE-EX-FILE

CODE
CONDUCT

Data management





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7
LAL INC. PAPER

CODE
CONDUCT

Output evolution

Report: Owner Units Transferred

RC	UNIT CODE	TP	FD	# TRANSFERS	DAYS OUT*	AVG DAYS OUT*	LOST UNITS	% NO CHARGE	DEMURRAGE REC	MTH BALANCE	YTD TOTAL
BA	AKE	JFK	XXX	1	29	29	0	100%	0.00	0.00	0.00
				1	29	29	0		0.00	0.00	0.00
DL	PMC	GRU	XXX	3	461	153	0	0%	3,746.00	3,746.00	8,534.00
DL	PMC	JFK	XXX	24	186	7	0	17%	554.00	554.00	1,445.00
				27	647	160	0		4,300.00	4,300.00	9,979.00
EK	AKE	LHR	XXX	5	38	7	0	0%	146.00	146.00	3,002.00
EK	PMC	LHR	XXX	13	123	9	0	8%	487.00	487.00	16,204.00
				18	161	16	0		633.00	633.00	19,206.00
LA	DQF	LIM	XXX	8	292	36	0	38%	1,499.00	1,499.00	3,402.00
LA	DQF	MVD	XXX	1	27	27	0	100%	0.00	0.00	0.00
LA	FQA	LIM	XXX	1	14	14	0	0%	63.00	63.00	63.00
LA	PLA	LIM	XXX	1	0	0	1	100%	0.00	0.00	0.00
				11	333	77	1		1,562.00	1,562.00	3,465.00
QF	PLA	HNL	XXX	1	1	1	0	100%	0.00	0.00	91.00
QF	PMC	HNL	XXX	31	263	8	0	39%	1,168.00	1,168.00	7,132.00
QF	PMC	MEL	XXX	2	21	10	0	0%	92.00	92.00	3,864.00
QF	PMC	NRT	XXX	1	15	15	0	0%	84.00	84.00	185.00
QF	PMC	SYD	XXX	4	33	8	0	0%	109.00	109.00	1,193.00
				39	333	42	0		1,453.00	1,453.00	12,465.00
QR	AKE	LHR	XXX	1	24	24	0	0%	213.00	213.00	213.00
QR	AKE	PHL	XXX	2	75	37	0	100%	0.00	0.00	0.00
				3	99	61	0		213.00	213.00	213.00



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LAL EXC 11916


CODE
CONDUCT

Screen Output

- Region
 - N.America
 - Europe
 - S.America
 - Asia
 - etc



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CODE
CONDUCT

N.America

- Atlanta: AKE 100, PMC 220, PLA 25
- Los Angeles: AKE 75, PMC 300, PLA 14
- New York: AKE 120, PMC, 235, PLA 10
- Chicago: AKE 130, PMC 180, PLA 0
- etc



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7
LAL-EM-1116E

CODE
CONDUCT

Atlanta drill down

- ATL 100 AKE, 200 PMC, 25 PLA
 - ABC Cargo terminal 50 AKE, 100 PMC, 12 PLA
 - Acme forwarders 25 AKE, 50 PMC, 9 PLA
 - Joe's forwarders 25 AKE, 50 PMC, 4 PLA



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7TH IELD CARE ANNUAL CONFERENCE


CODE
CONDUCT

Forwarder drill down

- Acme forwarders:
 - Within free demurrage: 15 AKE, 40 PMC, 9 PLA
 - 1-3 days overdue: 4 AKE, 8 PMC
 - 4-6 days overdue: 1 AKE, 2 PMC



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LIFE. ENL. FUTURE.

CODE
CONDUCT

Blockchain

- Blockchain and Asset tracking
 - A perfect application
 - Scalable
 - Integrate with smartphone APP
 - Immutable





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7
LAL EXC 11916

CODE
CONDUCT

What can we get from a new system

- Ability to handle "real world" addresses, expand footprint
- Instantaneous date entry and update- provide ULD controllers with accurate real time information on their ULD fleet.
- Eliminate unreliable and inaccurate paper based actions
- Add photographic evidence of ULD condition
- Ability to manage variable demurrage rates
- Bring discipline back to ULD



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7
LUL.ENC.FUTURE

CODE
CONDUCT

Why ULD CARE?

- Industry neutral platform
- Build on existing IULDUG system
- Non competing, potential to collaborate with other industry bodies
 - IATA
 - ASA
 - FIATA
- Who else can/will do it?



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7
LAL, EMC, PIPER

CODE
CONDUCT

Why Now?

- Current system cannot go on for ever, we may find that the underlying software is not longer supported (eg. Windows NT)
- New technology now available
- Opportunity to drive change in the manner ULD are used
- Current system relying on outdated data entry model, new tech enables us to bypass legacy messaging.



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LAL EXC 11916

CODE
CONDUCT

Stand alone or partnership?

- Partnership opportunities
 - ASA
 - IATA
 - FIATA
 - Others
- Models
 - Risk sharing partner
 - Loan



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An old old problem

- ULD have underpinned the spectacular growth in Air Cargo
- The evolution of ULD operations from airport to airport airline operations to a system wide multimodal operation was never planned, it just happened.
- The principles and processes governing the transfer of ULD between parties are unchanged since the 1970's.
- Much of the ULD operational activity is performed without discipline, a result of weak chains of responsibility



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New Solutions

- Mobile Apps
 - Replace pencil and paper with hand held and QR codes
 - Matched with BLE and other tagging systems
 - Dependable
- Blockchain
 - Designed to manage the transfer of "tokens" (ULD) in an immutable manner.