AMHS System Overview

ROBERTS FIR

System provider

- INTELCAN is Roberts FIR’s AMHS system provider

- SKYCOM AMHS is the product name for the INTELCAN AMHS system.

SKYCOM AMHS

The SKYCOM AMHS, being an ATN application, uses the infrastructure of the existing ATN network.

SKYCOM AMHS Services

The **SKYCOM AMHS** System provides support for the two service levels defined by ISO/IEC standards and ITU-T recommendations:

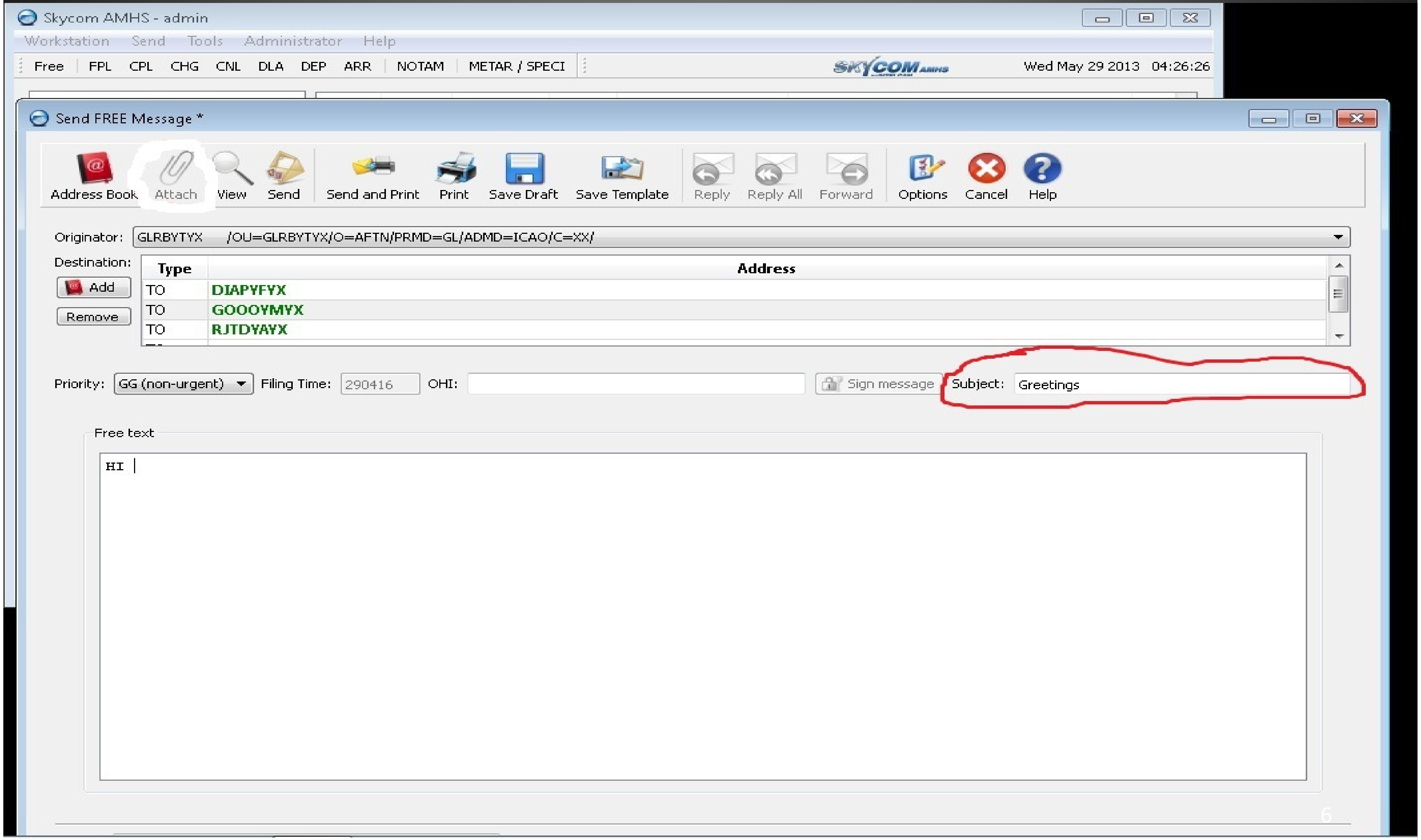
1. The Basic ATS Message Handling Service
2. The Extended ATS Message Handling Service

The basic AMHS Service system

The Basic AMHS service system performs an operational role similar to the AFTN with a few enhancements such as:

- ❑ Unlimited message length
- ❑ Unlimited number of message addressees
- ❑ Provision of non-delivery reports
- ❑ Message subject indication

The Basic AMHS Service


Skycom AMHS - admin
Workstation
Send
Tools
Administrator
Help
Free
FPL
CPL
CHG
CNL
DLA
DEP
ARR
NOTAM
METAR / SPECI
SKYCOM AMHS
Send FREE Message *
Address Book
Attach
View
Send
Send and Print
Print
Save Draft
Save Template
Reply
Reply All
Forward
Options
Cancel
Help
Add
Remove
Sign message

Wed May 29 2013 04:26:26

Originator: GLRBYTYX /OU=GLRBYTYX/O=AFTN/PRMD=GL/ADMD=ICAO/C=XX/

Destination:

Type	Address
TO	DIAPYFYX
TO	GOOOYMYX
TO	RJTDYAYX

Priority: GG (non-urgent)

Filing Time: 290416

OHI:

Subject: Greetings

Free text

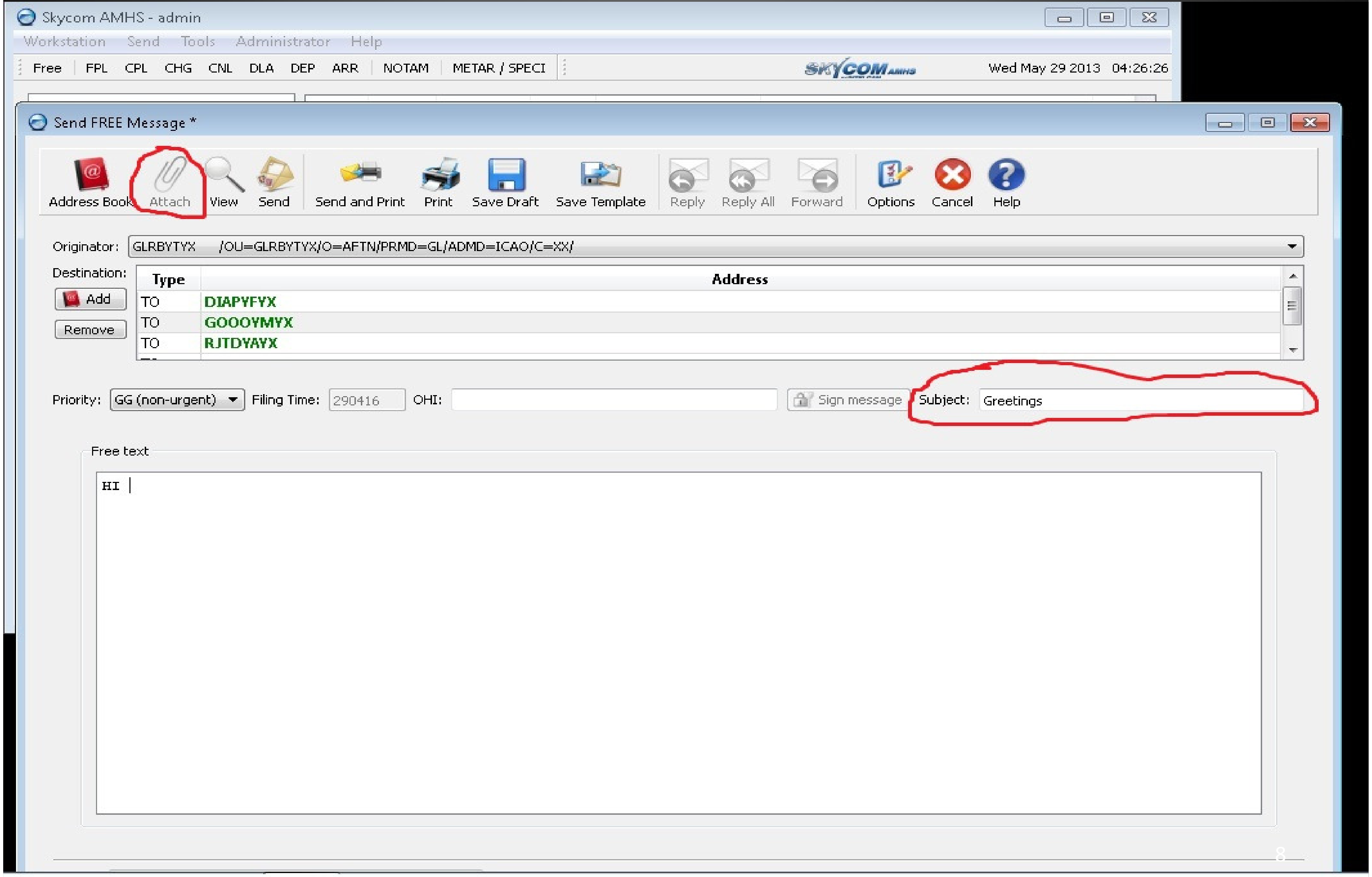
```
HI
```

The extended AMHS service system

The Extended AMHS Service is backwards compatible with the Basic AMHS Service, but provides additional functionality such as:

- The X.500 directory services
- Security mechanisms
- Attach binary data example, Binary Universal Form for the Representation of meteorological data (BUFR)

The Extended AMHS Service


Skycom AMHS - admin
Workstation
Send
Tools
Administrator
Help
Free
FPL
CPL
CHG
CNL
DLA
DEP
ARR
NOTAM
METAR / SPECI
SKYCOM AMHS
Send FREE Message *
Address Book
Attach
View
Send
Send and Print
Print
Save Draft
Save Template
Reply
Reply All
Forward
Options
Cancel
Help
Add
Remove
Sign message
Free text

Wed May 29 2013 04:26:26

Originator: GLRBYTYX /OU=GLRBYTYX/O=AFTN/PRMD=GL/ADMD=ICAO/C=XX/

Destination:

Type	Address
TO	DIAPYFYX
TO	GOOOYMYX
TO	RJTDYAYX

Priority: GG (non-urgent)

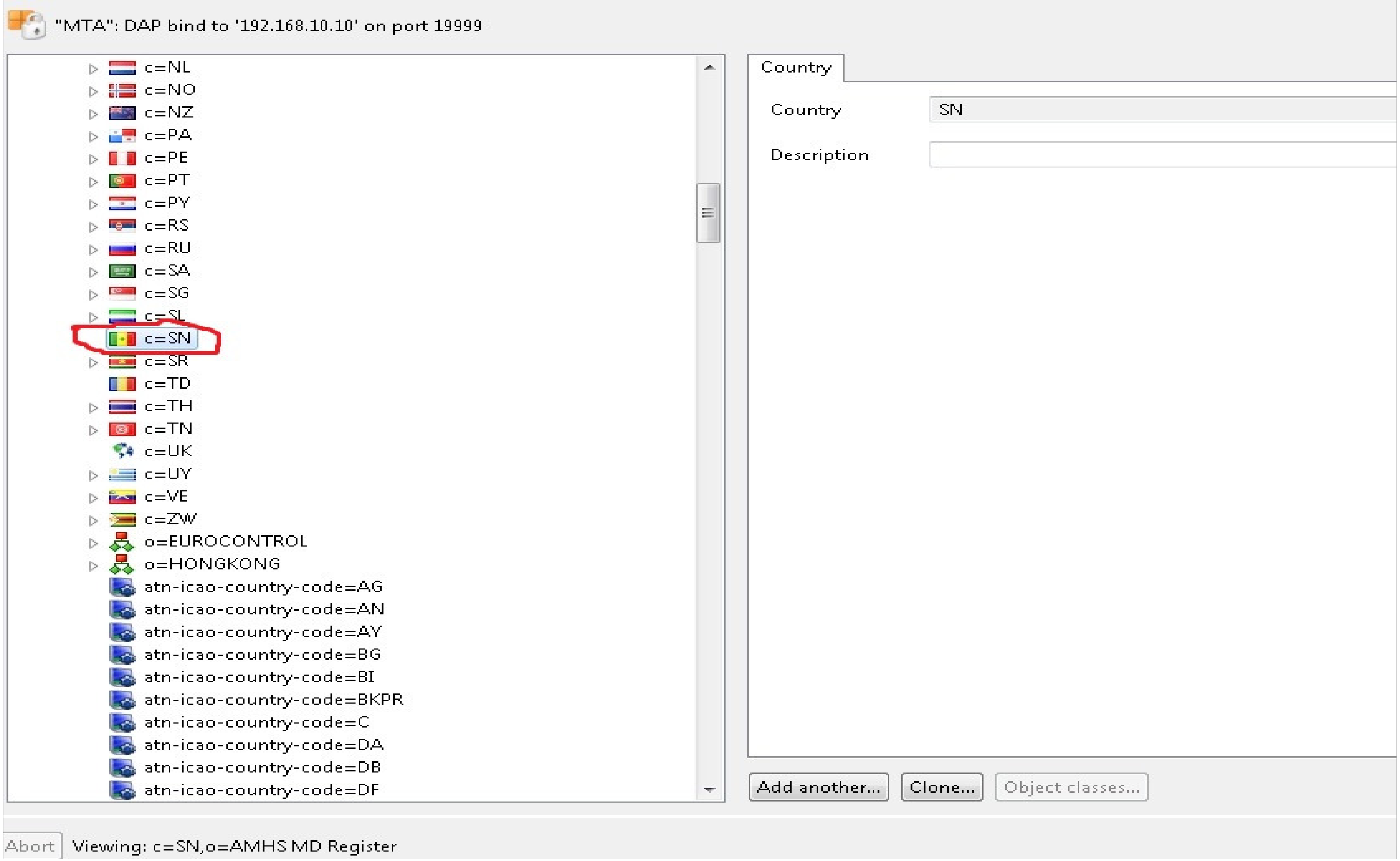
Filing Time: 290416

OHI:

Subject: Greetings

```
HI
```

Extended Services (Directory)



"MTA": DAP bind to '192.168.10.10' on port 19999

```
▷ c=NL
▷ c=NO
▷ c=NZ
▷ c=PA
▷ c=PE
▷ c=PT
▷ c=PY
▷ c=RS
▷ c=RU
▷ c=SA
▷ c=SG
▷ c=SL
  c=SN
▷ c=SR
  c=TD
▷ c=TH
▷ c=TN
  c=UK
▷ c=UY
▷ c=VE
▷ c=ZW
▷ o=EUROCONTROL
▷ o=HONGKONG
  atn-icao-country-code=AG
  atn-icao-country-code=AN
  atn-icao-country-code=AY
  atn-icao-country-code=BG
  atn-icao-country-code=BI
  atn-icao-country-code=BKPR
  atn-icao-country-code=C
  atn-icao-country-code=DA
  atn-icao-country-code=DB
  atn-icao-country-code=DF
```

Country

Country: SN

Description:

Viewing: c=SN,o=AMHS MD Register

SKYCOM AMHS Messages

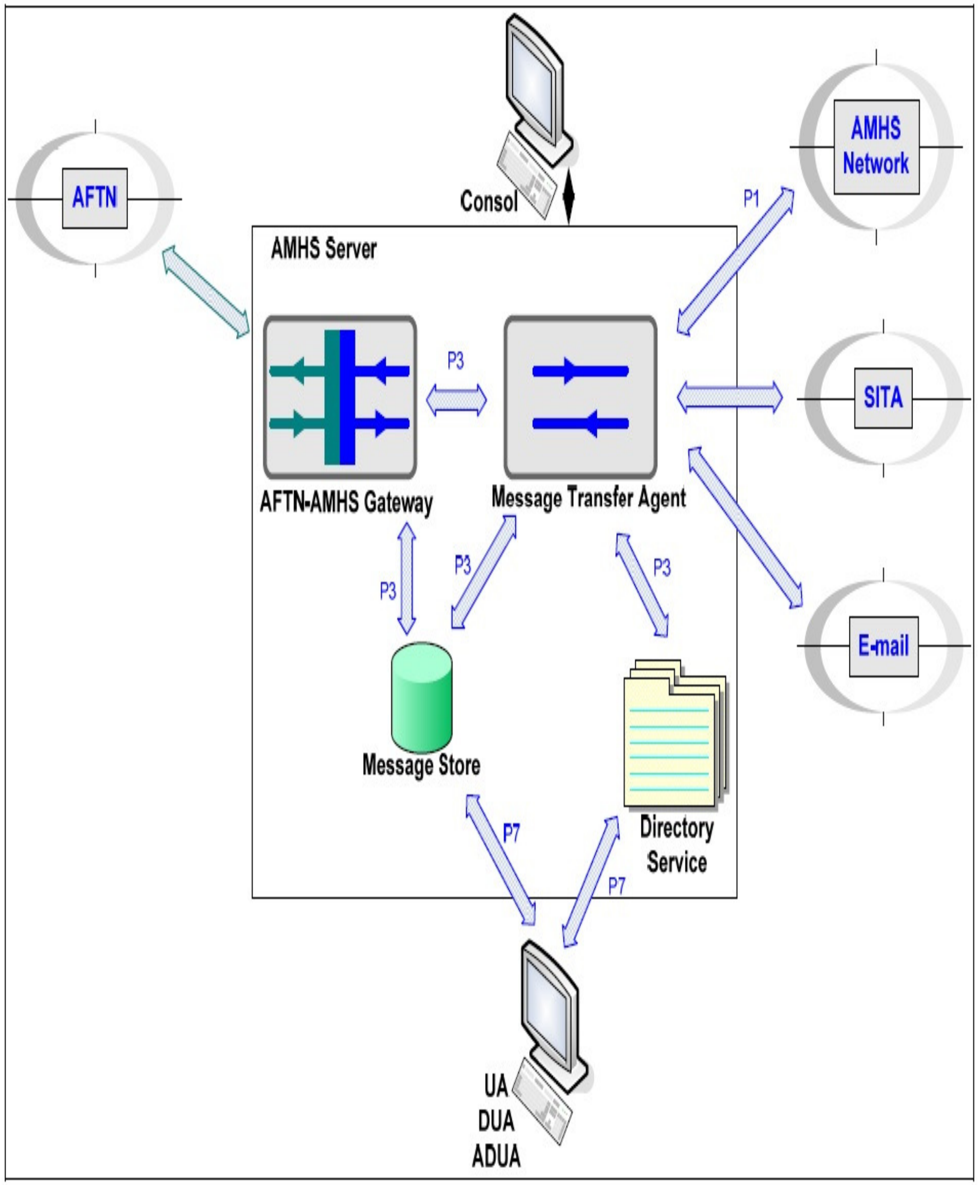
The message categories handled by the SKYCOM AMHS are:

- ☐ Meteorological messages
- ☐ Aeronautical information services message
- ☐ Network Support messages
- ☐ ATS messages
- ☐ WMO messages
- ☐ AMHS messages

SKYCOM AMHS Components

The main components of the SKYCOM AMHS are based on ICAO recommended standards, are as follows:

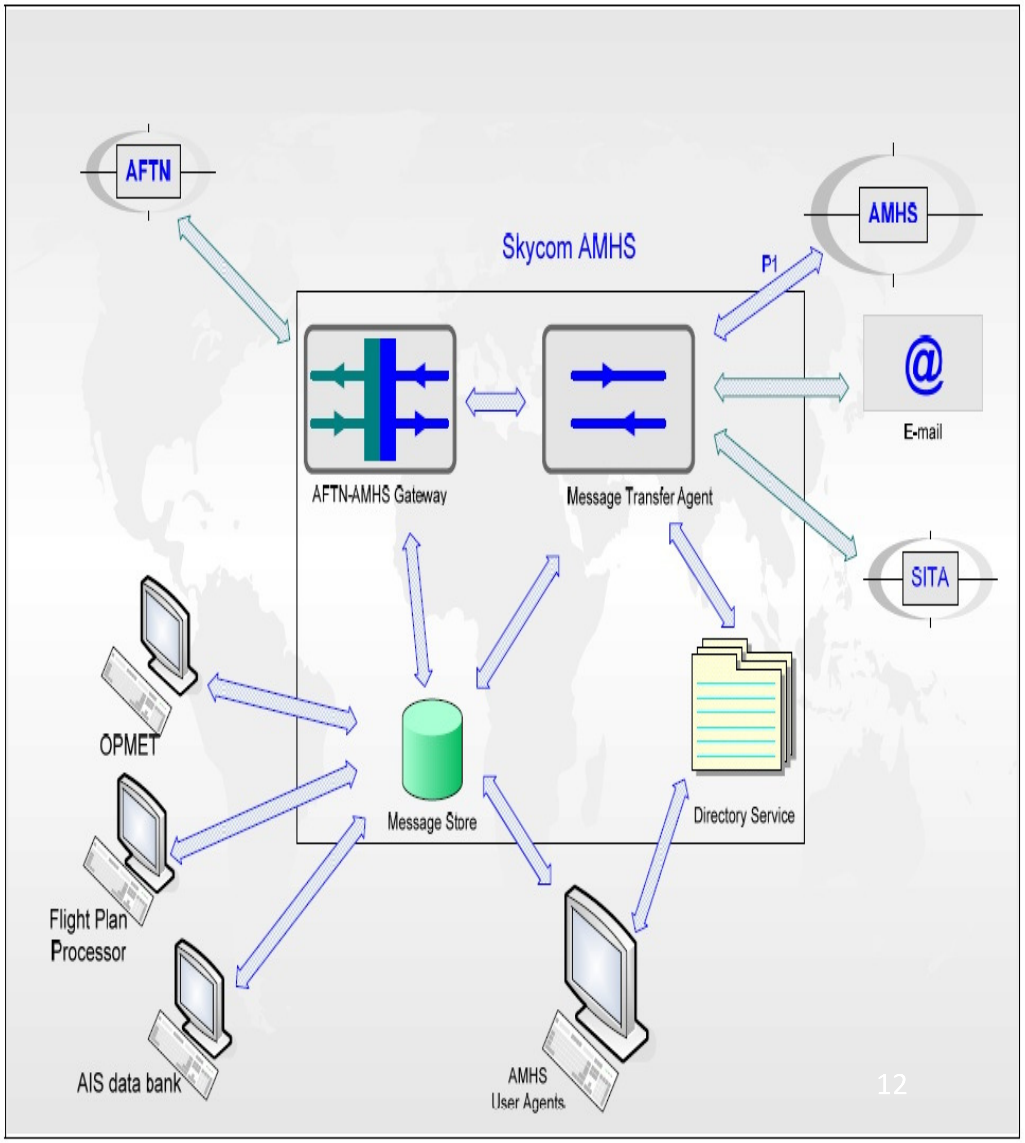
- AFTN/AMHS Gateway
- MTA – Message Transferring Agent
- AFTN Component
- AFTN and AMHS User Agents (UA
- MS – Message Store
- DS – Directory Server
- DUA – Directory User Agent
- ADUA – Administrative Directory User Agent


Consol
AFTN
AMHS Network
AMHS Server
P1
P3
SITA
AFTN-AMHS Gateway
Message Transfer Agent
E-mail
P3
P3
P3
Message Store
Directory Service
P7
P7
UA
DUA
ADUA

SKYCOM AMHS as part of ATS

The SKYCOM AMHS can exchange specific message types with different ATS applications, such as:

- ❑ AIS data bank,
- ❑ OPMET
- ❑ Flight processors

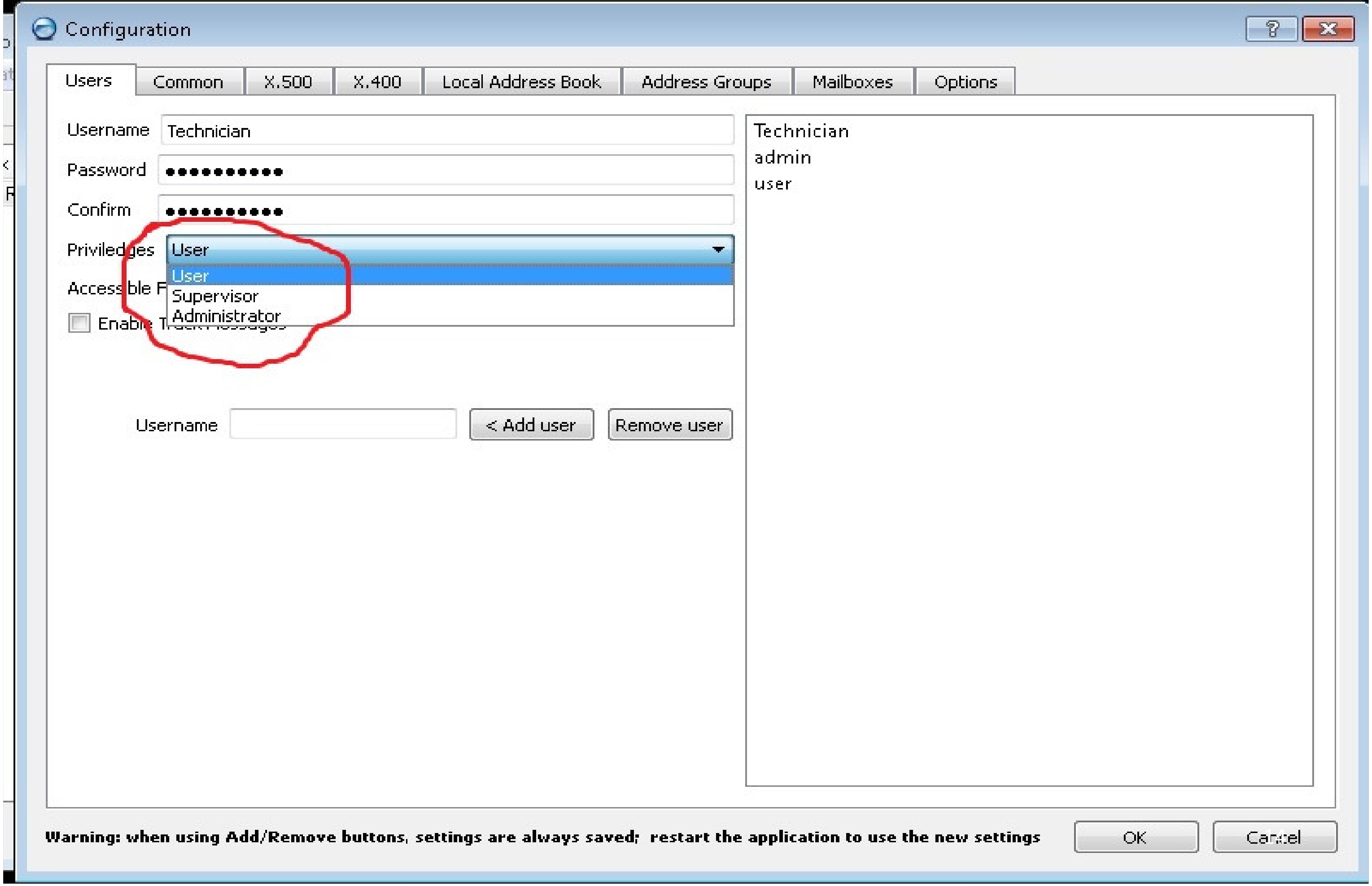

AFTN
Skycom AMHS
P1
AMHS
E-mail
SITA
AFTN-AMHS Gateway
Message Transfer Agent
OPMET
Message Store
Directory Service
Flight Plan Processor
AIS data bank
AMHS User Agents

SKYCOM AMHS User Agents

SKYCOM AMHS has three types of user agents (graphical user interface)

1. UA: user agent (User)
2. DUA: Directory User Agent (Supervisor)
3. ADUA: Administrative Directory user Agent (Administrator)

SKYCOM AMHS user agents (Users)


Configuration
Users
Common
X.500
X.400
Local Address Book
Address Groups
Mailboxes
Options
< Add user
Remove user
OK
Cancel

Username Technician

Password ●●●●●●●●●●●

Confirm ●●●●●●●●●●●

Priviledges User

- User
- Supervisor
- Administrator

Access ble F

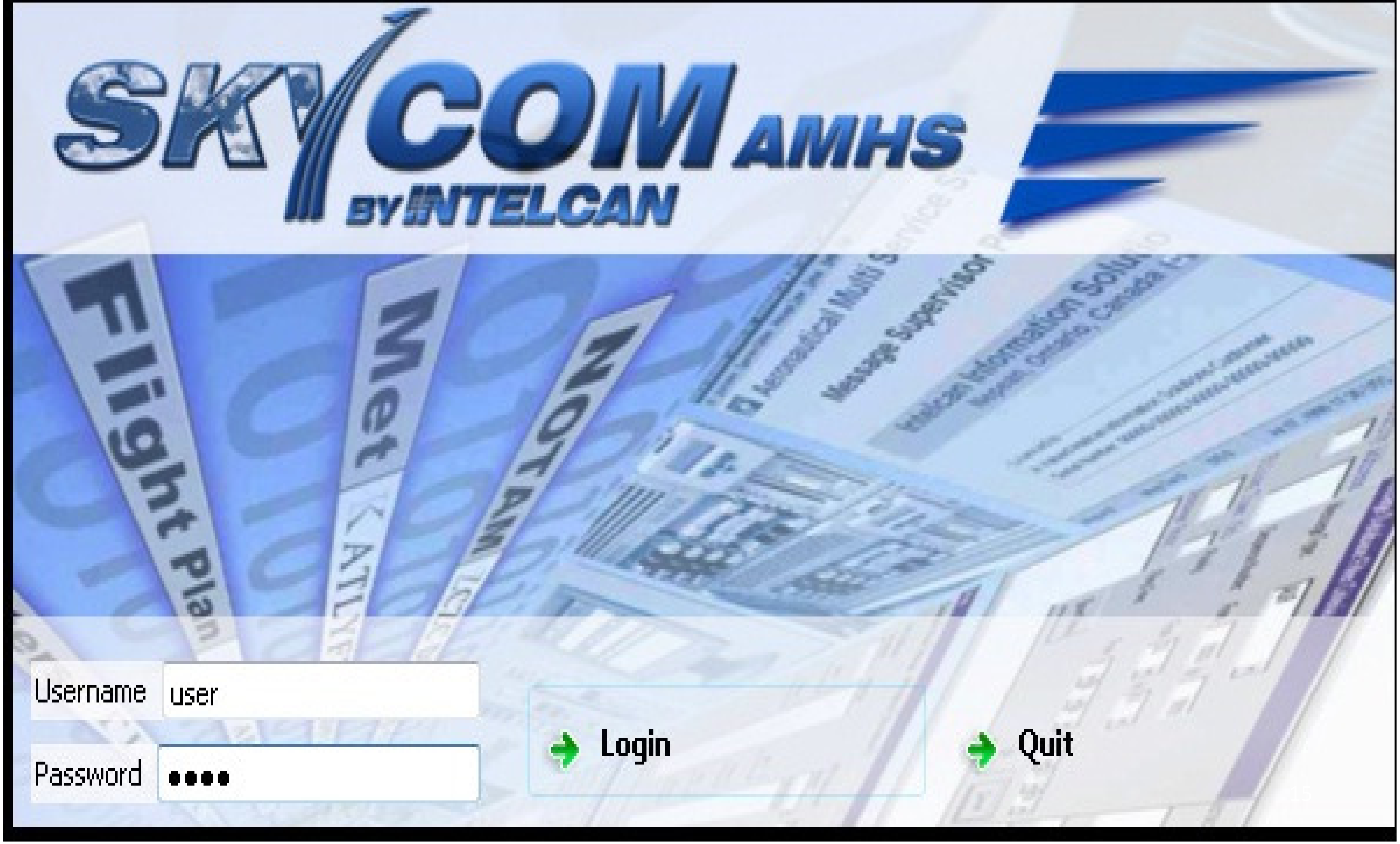
☐ Enab T

Username

Technician
admin
user

Warning: when using Add/Remove buttons, settings are always saved; restart the application to use the new settings

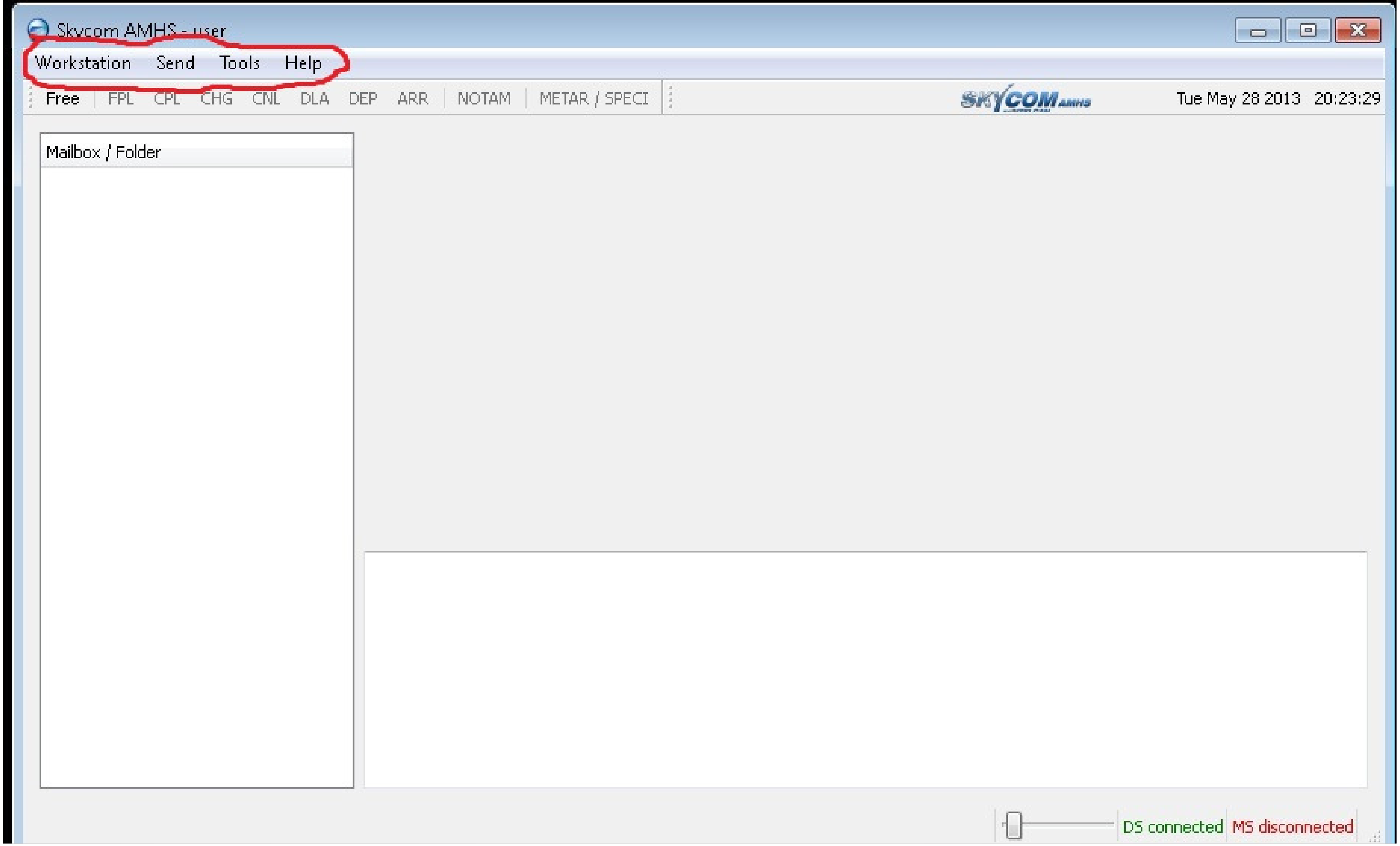
(UA) User


SKYCOM AMHS
BY INTELCAN
Flight Plan
Met
NOTAM
Login
Quit

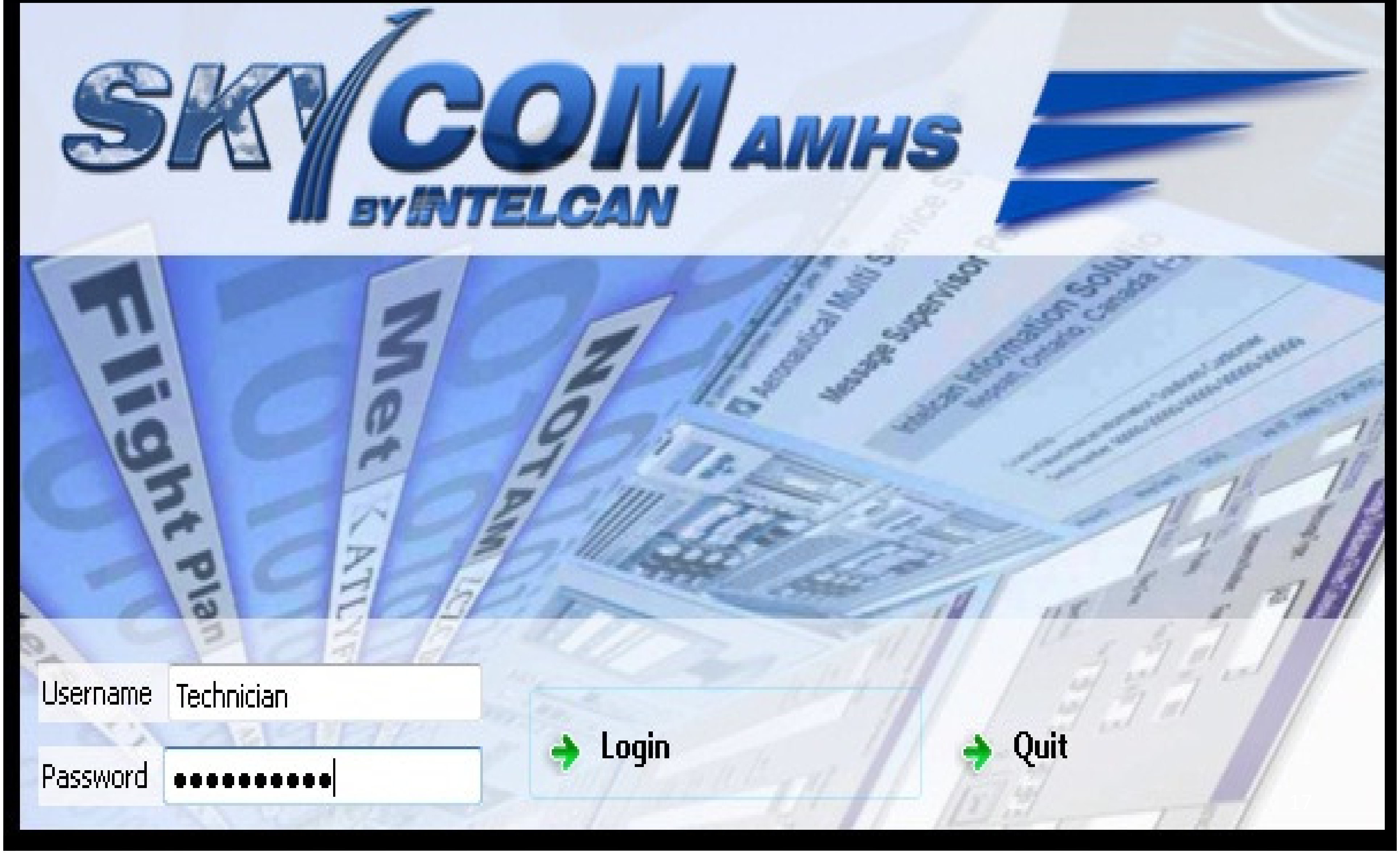
Username user

Password ●●●●

UA (User) Graphical User Interface


Skycom AMHS - user
Workstation
Send
Tools
Help
Free
FPL
CPL
CHG
CNL
DLA
DEP
ARR
NOTAM
METAR / SPECI
SKYCOM AMHS
Tue May 28 2013 20:23:29
Mailbox / Folder
DS connected
MS disconnected

DUA (supervisor)

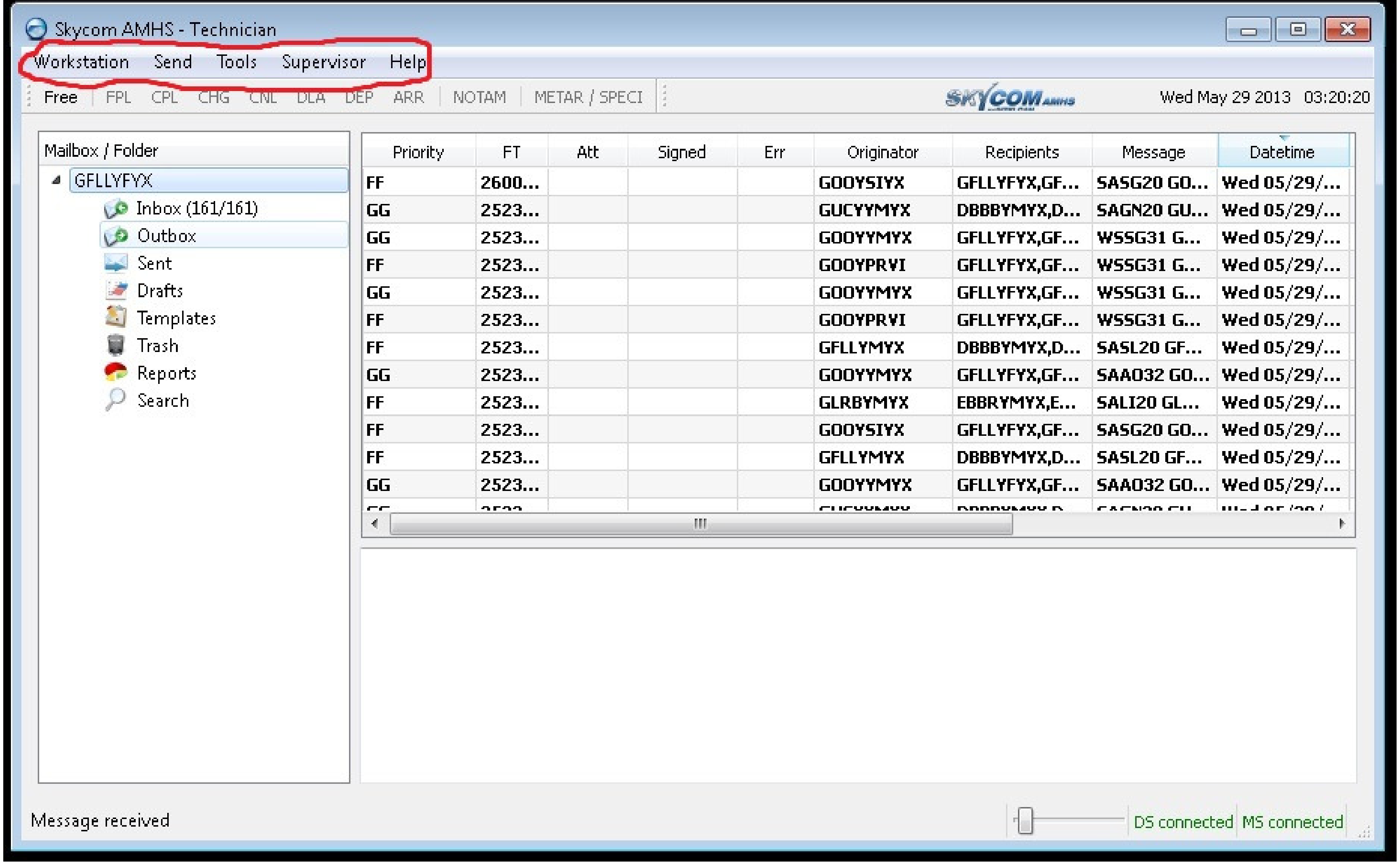


Username Technician

Password ●●●●●●●●●●●

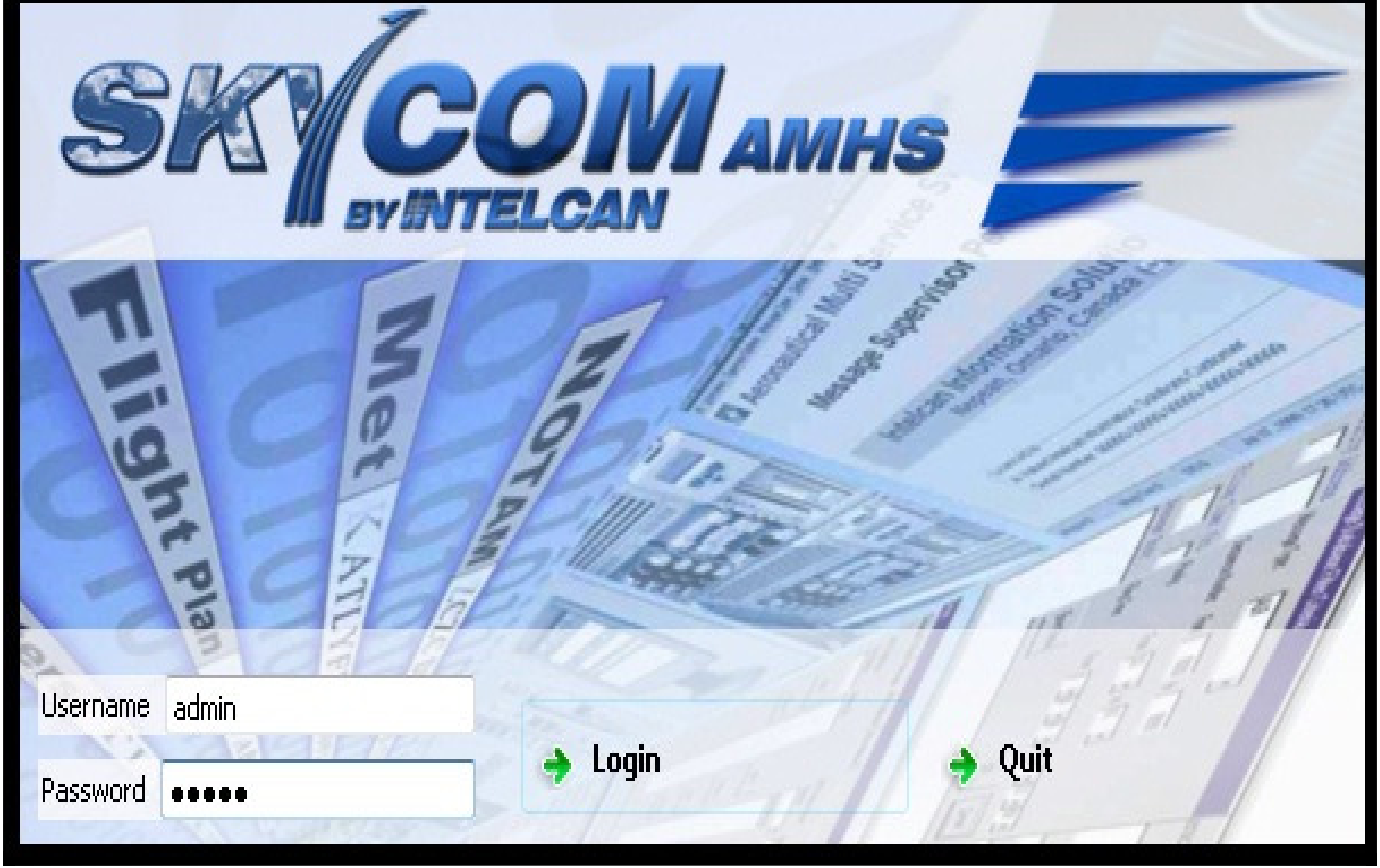
SKYCOM AMHS
BY INTELCAN
Flight Plan
Met
NOTAM
Login
Quit

DUA (supervisor) Graphical user interface


Skycom AMHS - Technician
Workstation
Send
Tools
Supervisor
Help
Free
FPL
CPL
CHG
CNL
DLA
DEP
ARR
NOTAM
METAR / SPECI
SKYCOM AMHS
Wed May 29 2013 03:20:20
Mailbox / Folder
GFLLYFYX
Inbox (161/161)
Outbox
Sent
Drafts
Templates
Trash
Reports
Search
Message received
DS connected
MS connected

Priority	FT	Att	Signed	Err	Originator	Recipients	Message	Datetime
FF	2600...				GOOYSIYX	GFLLYFYX,GF...	SASG20 GO...	Wed 05/29/...
GG	2523...				GUCYYMYX	DBBBYMYX,D...	SAGN20 GU...	Wed 05/29/...
GG	2523...				GOOYYMYX	GFLLYFYX,GF...	WSSG31 G...	Wed 05/29/...
FF	2523...				GOOYPRVI	GFLLYFYX,GF...	WSSG31 G...	Wed 05/29/...
GG	2523...				GOOYYMYX	GFLLYFYX,GF...	WSSG31 G...	Wed 05/29/...
FF	2523...				GOOYPRVI	GFLLYFYX,GF...	WSSG31 G...	Wed 05/29/...
FF	2523...				GFLLYMYX	DBBBYMYX,D...	SASL20 GF...	Wed 05/29/...
GG	2523...				GOOYYMYX	GFLLYFYX,GF...	SAA032 GO...	Wed 05/29/...
FF	2523...				GLRBYMYX	EBBRYMYX,E...	SALI20 GL...	Wed 05/29/...
FF	2523...				GOOYSIYX	GFLLYFYX,GF...	SASG20 GO...	Wed 05/29/...
FF	2523...				GFLLYMYX	DBBBYMYX,D...	SASL20 GF...	Wed 05/29/...
GG	2523...				GOOYYMYX	GFLLYFYX,GF...	SAA032 GO...	Wed 05/29/...

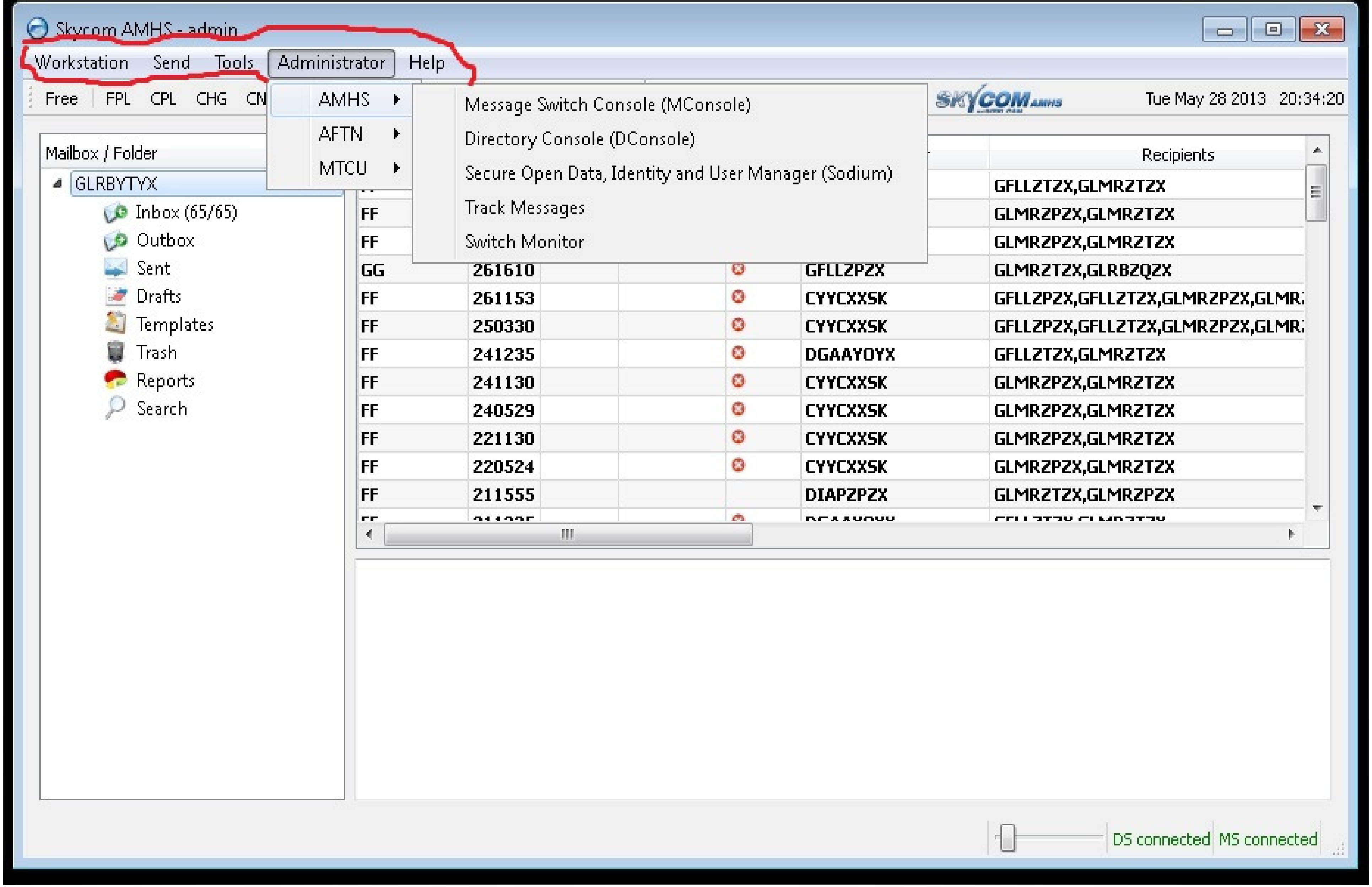
ADUA (System administrator)


SKYCOM AMHS
BY INTELCAN
Flight Plan
Met
NOTAM
Login
Quit

Username admin

Password ●●●●●

ADUA (System administrator) GUI


Skycom AMHS - admin
Workstation
Send
Tools
Administrator
Help
Free
FPL
CPL
CHG
CN
AMHS
AFTN
MTCU
Message Switch Console (MConsole)
Directory Console (DConsole)
Secure Open Data, Identity and User Manager (Sodium)
Track Messages
Switch Monitor
SKYCOM AMHS
Tue May 28 2013 20:34:20
Mailbox / Folder
GLRBYTYX
Inbox (65/65)
Outbox
Sent
Drafts
Templates
Trash
Reports
Search
DS connected
MS connected

						Recipients
						GFLLZTZX,GLMRZTZX
FF						GLMRZPZX,GLMRZTZX
FF						GLMRZPZX,GLMRZTZX
GG	261610			⊗	GFLLZPZX	GLMRZTZX,GLRBZQZX
FF	261153			⊗	CYYCXXSK	GFLLZPZX,GFLLZTZX,GLMRZPZX,GLMR
FF	250330			⊗	CYYCXXSK	GFLLZPZX,GFLLZTZX,GLMRZPZX,GLMR
FF	241235			⊗	DGAAYOYX	GFLLZTZX,GLMRZTZX
FF	241130			⊗	CYYCXXSK	GLMRZPZX,GLMRZTZX
FF	240529			⊗	CYYCXXSK	GLMRZPZX,GLMRZTZX
FF	221130			⊗	CYYCXXSK	GLMRZPZX,GLMRZTZX
FF	220524			⊗	CYYCXXSK	GLMRZPZX,GLMRZTZX
FF	211555				DIAPZPZX	GLMRZTZX,GLMRZPZX

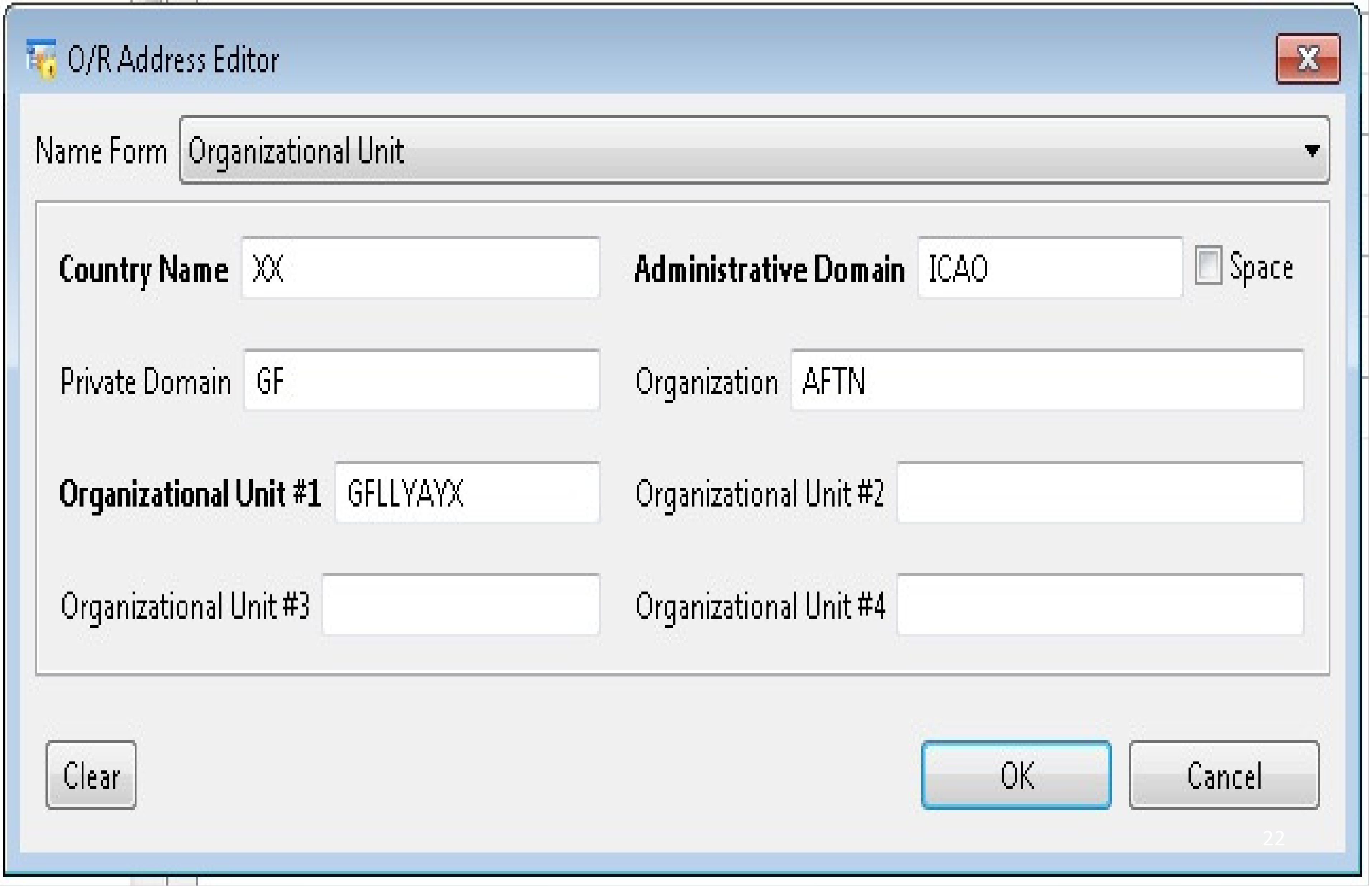
SKYCOM AMHS Addressing

SKYCOM AMHS uses two types of addressing

1. Common AMHS Addressing Schemas (CAAS)
2. XF

Roberts FIR is using the XF addressing

XF Addressing


O/R Address Editor
X
Clear
OK
Cancel

Name Form: Organizational Unit

Country Name: XX

Administrative Domain: ICAO ☐ Space

Private Domain: GF

Organization: AFTN

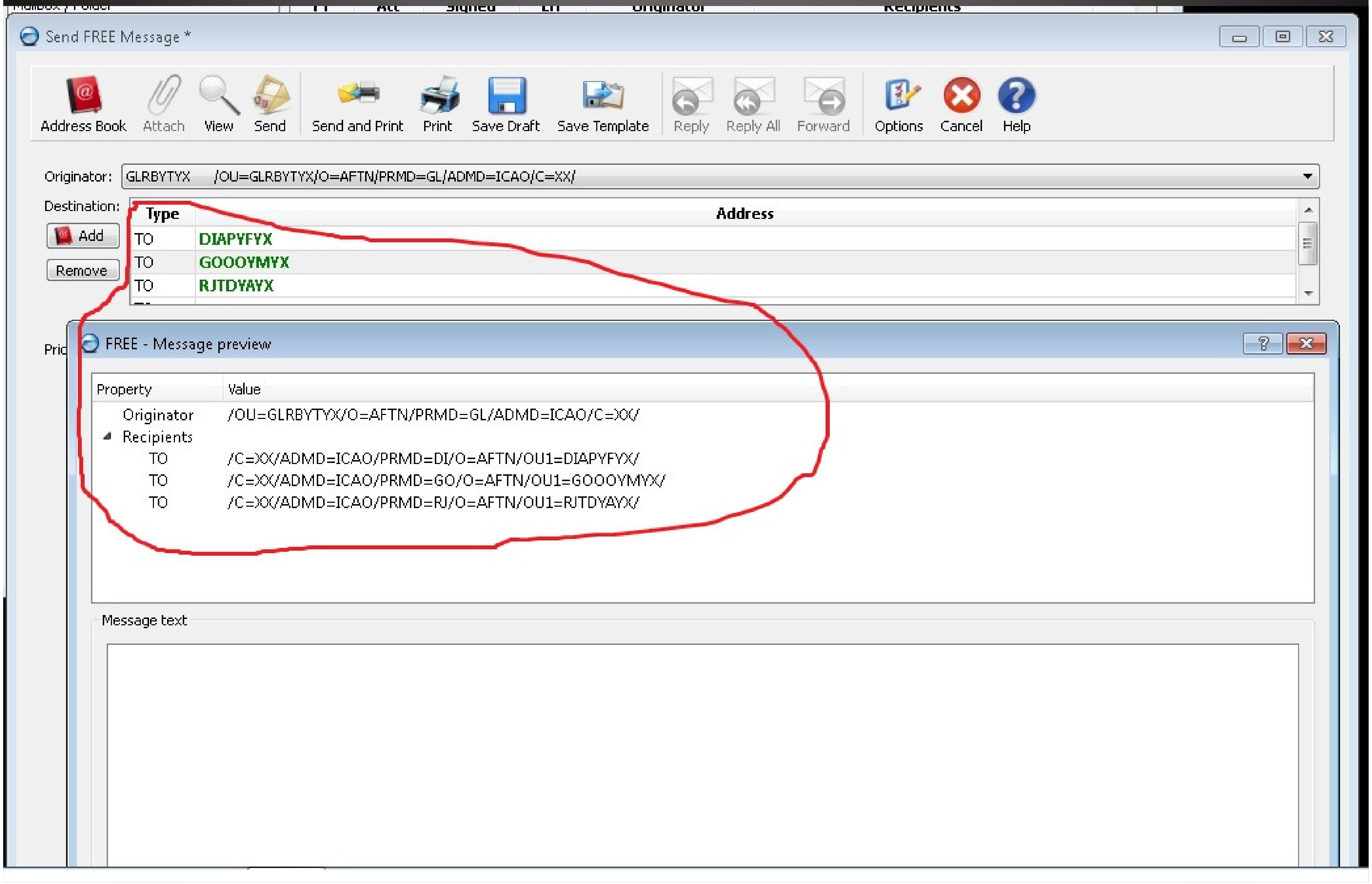
Organizational Unit #1: GFLLYAYX

Organizational Unit #2:

Organizational Unit #3:

Organizational Unit #4:

Converting AFTN addresses to XF



Send FREE Message *
Address Book
Attach
View
Send
Send and Print
Print
Save Draft
Save Template
Reply
Reply All
Forward
Options
Cancel
Help
Add
Remove
FREE - Message preview
Message text

Originator: GLRBYTYX /OU=GLRBYTYX/O=AFTN/PRMD=GL/ADMD=ICAO/C=XX/

Destination:

Type	Address
TO	**DIAPYFYX**
TO	**GOOOYMYX**
TO	**RJTDYAYX**

Property	Value
Originator	/OU=GLRBYTYX/O=AFTN/PRMD=GL/ADMD=ICAO/C=XX/
Recipients	
TO	/C=XX/ADMD=ICAO/PRMD=DI/O=AFTN/OU1=DIAPYFYX/
TO	/C=XX/ADMD=ICAO/PRMD=GO/O=AFTN/OU1=GOOOYMYX/
TO	/C=XX/ADMD=ICAO/PRMD=RJ/O=AFTN/OU1=RJTDYAYX/

Example of AFTN address conversion to CAAS

AFTN

GUCYYPYX

XF

/C=XX/ADMD=ICAO/PRMD=GU/O=AFTN/OU1=GUCYYPYX

End

Thank you