The MFidelio Driver

The MFidelio driver allows North to interface with a MICROS property management system (PMS), used in many large hotels, to obtain room occupancy information. Available for Commander and ObSys.

This document relates to MFidelio driver version 1.0

Please read the *Commander Manual* or *ObSys Manual* alongside this document, available from *www.northbt.com*

Contents

Compatibility with the MFidelio System

The MFidelio driver allows North to interface with a MICROS property management system (PMS), used in many large hotels, to obtain room occupancy information.

The driver connects, via an RS232 serial connection, to a PC running MICROS PMS software (Fig. 1). The driver maintains a database of occupied rooms and updates it as guests check-in and out.

Fig. 1 North to MFidelio
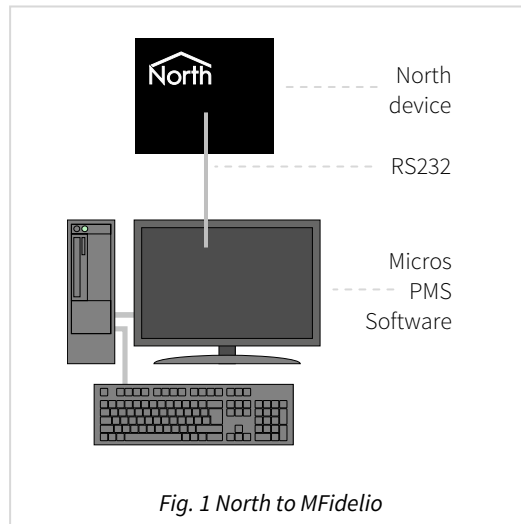
Equipment

MICROS property management systems (PMS) compatible with the driver include:

- OPERA
- Fidelio Suite8

Values

The MICROS PMS can typically provide the following values:

- Individual room occupancy state
- Total rooms occupied

Prerequisites

The MICROS PMS will require the 'NBT' interface installing. This is available as an optional add-on from MICROS-Fidelio directly using the following information:
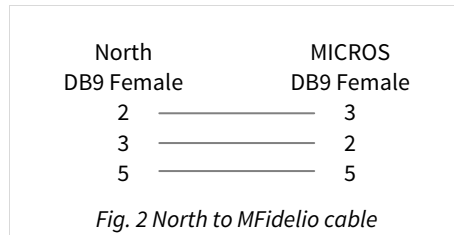
Interface: North Building Technologies Ltd
Part Number: 5007-060
FKT Logo: NBT

Using the Driver

On ObSys, the MFidelio driver is pre-installed. On Commander, the driver is available to download in the file 'Bank13 MFidelio.cdm'. On all of these North devices, you can use the driver to create an interface to a MICROS PMS. Once started, you will need to set up the driver before it can communicate with the MICROS system.

Making the Cable

Using the RS232 cable specification (Fig. 2), connect the North device COM port to the MICROS PC COM port. Connector types at each end of the cable are shown.

```
      North              MICROS
   DB9 Female          DB9 Female
       2    ───────────    3
       3    ───────────    2
       5    ───────────    5
```
Fig. 2 North to MFidelio cable

The maximum RS232 cable length is 15m.

Cables are available from North, order code CABLE/MICROS.

Starting the Interface

🖳   To start an interface using the MFidelio driver, follow these steps:

→   **Start Engineering** your North device using ObSys

→   Navigate to **Configuration, Interfaces,** and set an unused **Interface** to 'MFidelio' to start the particular interface

→   Navigate to the top-level of your North device and re-scan it

The driver setup object (M*c*), labelled **MICROS Setup**, should now be available. If this object is not available, check an interface licence is available and the driver is installed.

Setting up the Driver

🖳   To set up the driver, follow these steps:

→   Navigate to the **MICROS Setup** object (M*c*). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'

→   Set **RS232 COM Port** (RS.COM) to the port number of the North device you are connecting to MICROS

→   Set the **Baud Rate** (RS.BR) and **Byte Format** (RS.BF) to match the setting in the MICROS PC

→   Set the **Room Number Format** (R) to match the room number format.

Checking Communications

You can check that the interface is communicating by reading the **Comms Online** object (DS). A value of 'Yes' indicates the driver has connected to, and is communicating with the MICROS PMS.

Use the **Database State** object (LS) to check if the driver is synchronising the database of occupied rooms from the MICROS PMS, and is online.

Object Specifications

Once an interface is started, one or more extra objects become available within the top-level object of the device. As with all North objects, each of these extra objects may contain sub-objects, (and each of these may contain sub-objects, and so on) – the whole object structure being a multi-layer hierarchy. It is possible to navigate around the objects using the ObSys Engineering Software.

Each object is specified below, along with its sub-objects.

Example Object Reference

An example of a reference to an object in the same device: the MICROS System (S1) contains the state of a room numbered 301 (R301.S). Therefore, the object reference will be 'S1.R301.S'.

An example of a reference to an object in a different device: the IP network object (IP) contains Default Commander object (CDIP), which contains the object above (S1.R301.S) – therefore the complete object reference is 'IP.CDIP.S1.R301.S'.

Device Top-Level Objects

When an interface is started using the MFidelio driver, the objects below become available within the top-level object of the device. For example, if Interface 1 is started, then the object with references 'M1' and 'S1' become available.

Description	Reference	Type
MICROS Setup Set up the MFidelio driver, started on interface c (c is the interface number)	Mc	Fixed Container: On the Commander platform this will be *[CDM v20\MFidelio v10]* On the ObSys platform this will be *[OSM v20\MFidelio v10]*
MICROS System Access MICROS system connected to interface c (c is the interface number)	Sc	Fixed Container: *[MFidelio v10]*

MICROS Setup

Object Type: *[OSM v20\MFidelio v10]*
Object Type: *[CDM v20\MFiedlio v10]*

The MICROS property management system is capable of handling room numbers of up to eight characters. However, the driver only has a finite amount of storage available to hold the database of occupied rooms. Use the **Room Number Format** (R) to maximise the amount of storage available.

The table below shows the maximum room storage the driver can store, depending on room number format:

Room Number Format	Maximum Room Storage
Text up to 8 characters	512
Text up to 4 characters	1024
Number in the range 0…65535	2048

The MFidelio driver contains the following objects:

Description	Reference	Type
RS232 COM Port	RS.COM	Obj\Num: 1…8; Adjustable
Baud Rate	RS.BR	Obj\Num; Adjustable Values: 9600, 19200, 38400
Byte Format Sets the parity, data bits and stop bits	RS.BF	Obj\ENum; Adjustable See note 1
Room Number Format Limited room storage is available within the driver. Set to match the format of room numbers configured in the MICROS system – text up to 8 or 4 characters, or numeric only	R	Obj\ENum: 0…2; Adjustable Values: 0=Text (Up to 8 characters), 1=Text (Up to 4 characters), 2=Number (0…65535)
Maximum room storage Each room occupancy state must be remembered by the driver. The maximum storage available is determined by the Room Number Format	MR	Obj\Num: 512, 1024, or 2048
Comms Online Indicates whether communication is established with the MICROS system	DS	Obj\NoYes
Database State Indicates if the driver is synchronizing its database of room states with MICROS, and if it is up to date	LS	Obj\ENum: 0…2 Values: 0=Offline (No comms with MICROS), 1=Synchronizing, 2=Online (Database up to date)
Fail when synchronizing Use this option to select if object requests should be failed while the database is synchronising with MICROS. If set to 'No', then the driver will return room occupancy states as '0' during the database synchronisation period	SF	Obj\NoYes; Adjustable

Notes

1   Byte format can have the following values:

Value	Parity	Data bits	Stop bits		Value	Parity	Data bits	Stop bits
0	None	8	1		6	Odd	7	1
1	None	8	2		7	Odd	7	2
2	None	7	1		8	Even	8	1
3	None	7	2		9	Even	8	2
4	Odd	8	1		10	Even	7	1
5	Odd	8	2		11	Even	7	2

MICROS System

Object Type: *[MFidelio v10]*

The MICROS System reports the occupancy state of rooms within the property management system.

Room numbers can be eight characters, four characters, or a numerical reference. The Room Number Format object should be configured within MICROS Setup object.

The following objects are available:

Description	Reference	Type
Occupied Room Count Total number of rooms occupied	C	Obj\Num: 0…2048
Room *y* Occupied The room reference, *y*, can be an eight-character label, four-character label, or a number. Example object references: Use R301.S for room 301, RA12.S for room A12, and RPENT.S for room PENT, etc.	R*y*.S	Obj\NoYes
Database Entry *x* – room Provides direct access to the database of occupied rooms stored by the driver. The database entry number, *x*, is in the range 1…Room Count.	E*x*	Obj\Text

Driver Versions

Version	Build Date	Details
1.0	27/10/2011	Driver released
1.0	13/01/2014	New object SF – Fail when Syncing added Mod: Added formula objects
1.0	10/11/2015	Mod: set default baud rate. Modified labels.

FIAS Specification

The driver transmits (Tx) and receives (Rx) the following messages, as part of the FIAS protocol:

Direction	Details
Tx/Rx	LS | DA… | TI…
Tx/Rx	LA | DA… | TI…
Tx	LD | DA… | TI…
Tx	LR | RIGI | FLRNG#GS |
Tx	LR | RIGO | FLRNG#GS |
Tx	DR | DA… | TI…
Rx	DS
Rx	DE
Rx	GI | RN… |
Rx	GO | RN… | GS
Rx	GC | RO… | GS…
Rx	LE

Next Steps…

If you require help, contact support on 01273 694422 or visit *www.northbt.com/support*

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