

# MB DATA PREPARATION

FOR ICAO COMPLIANT eMRTD

MB DATA PREPARATION provides interchangeable and customizable functions for implementing the preparation of personalization data for electronic travel documents in accordance with ICAO Doc 9303 and ISO/IEC 18013-2. It guarantees ICAO-compliant documents across all Mühlbauer personalization equipment, regardless of the local production settings.



## KEY ELEMENTS OF MB DATA PREPARATION

MB DATA PREPARATION is a part of Mühlbauer's production management solution MB INCAPE.

MB DATA PREPARATION provides customizable ICAO-compliant functions for automatically preparing the data according to the document type to be personalized. It can be integrated in the data flow from the time the data is received by MB INCAPE, throughout personalization, quality assurance and mailing.

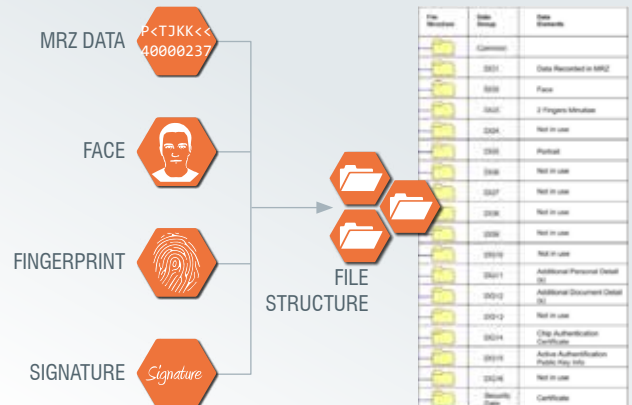
In the standard setup, there are two MB DATA PREPARATION modules in the data flow:

### VISUAL DATA FOR DOCUMENT PERSONALIZATION

Creation of the visual data for document personalization according to the applicable truncation rules for name, surname and address, creation of the Machine-Readable Zone (MRZ), generation of optical security features (Invisible Picture Information, Letter Screen) or generation of a barcode.

### DATA FOR ELECTRONIC PERSONALIZATION

Creation of the data for electronic personalization by interacting directly with the MB MCES chip-coding DLL and the Document Signer of the public key infrastructure (PKI) for electronically signing chip data groups.



100% ICAO-COMPLIANT eMRTD PERSONALIZATION





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## COMPONENTS AND FUNCTIONALITY

MB DATA PREPARATION serves different customer needs and various national standards. It includes a connection to other modules, such as machine MB MCES Coding DLL, the Document Signer of the PKI, the user management system or a civil register.

### VISUAL DATA PREPARATION SUPPORTS VARIOUS OPERATIONS ON STRINGS, FOR EXAMPLE

- Concatenation, splitting, insertion, truncation, formatting, value mapping
- The application can “translate” all country codes as they are defined by ICAO Doc 9303 or ISO 3166 into the country name or the nationality term in the target language.
- Functionalities for image processing, image enhancement and generation of time-depending data
- Support of signature data as images or vector templates
- Generation of Unique Document ID and Luhn 30 Check Digits
- Generation of 1D barcodes (Code128 and Code 3of9) and 2D barcodes (DataMatrix, pdf417, QR Code)
- Full support of the Unicode standard. All data preparation functions support left-to-right and right-to-left scripts.

### VISUAL SECURITY FEATURES SUPPORTED

- Letter-Screen; Invisible Picture Information (IPI)
- Ghost image creation

### ICAO DATA PREPARATION FULLY SUPPORTS

- Generation and formatting of the MRZ (machine-readable zone) in compliance with ICAO Doc 9303
- Transformation of biometric data such as fingerprint data and iris data according to ICAO requirements

### ICAO-COMPLIANT LDS DATA GENERATION

- Support for ePassports and eID cards as described in ICAO Doc 9303
- Support for electronic driver’s licenses as specified in ISO/IEC 18013-2

### INTERFACES

- File-based data interface
- Web-service-based data interface
- Customizable interface to customer-specific modules for encryption etc.
- MB USER MANAGEMENT (functionality to encrypt, decrypt and electronically sign data)
- Public Key Infrastructure (PKI) for signing chip data groups

### DEPLOYMENT

The default deployment is on a server environment. A standalone workstation or a portable solution are supported as well. MB DATA PREPARATION is designed to handle parallel requests via a web-service interface.

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