

Printing in a vertical solution

— —

an introduction to
Data-Air-Gaping

FileMaker can print, right?

... so what is the problem?

- Layouts are structure driven
 - ... that is well and fine for the UI
 - ... that is crap for PrintLayouts
as they are customer-specific

Consequences

What can go wrong, will

- using the FMDMT for updating would ruin all non standard print-layouts for the customer
- having ALL print-layouts of all customers in the solution seems insecure
- print-layouts are often touched with live data as the form has to follow the function.

The classical way

have a print layout file that has all the data files included as External Data Source

+ lightning fast

- breaks, if the structure changes

- every user being able to change the layout has access to all data from the tables included

• ? with layout access you can create a button that calls a script in the included file

The new way

What we wanted

- a user starts a script in a file where he has access to specific data
- this script collects the data that is needed to print the record(s)
- this data is then transferred to the PrintLayouts file
- ... tbc

The new way

... continued

- the PrintLayouts file should know as little as possible of the files sending the data
- any Admin should be technically able to change print layouts by himself or by outsourcing to any FM-Consultant
- the transferred data should be efemeral (never hitting the harddrive, not ending up in a backup)

What we did

... to make this happen

- we use the MBS("QuickList") functions as a vehicle to transfer the data across file borders
- we use separate lists for numeric, date and text fields
- we use json data-structure to make the data readable
- we use MagicalValueLists in the PrintLayouts file to cut through the json

Problems encountered

... and how we solved them

- we needed to use the FieldID for the DataJSON as node names so renaming a field does not break the layout (as JSONs in FM are alphabetically sorted)
- we split the datatypes in separate QuickLists so you can use proper field-formatting in the layouts.
- ...

Problems encountered

... continued

- we need not 3 but at least 6 QuickLists so that we can not only transport the data but also the field-names
- you can reutilise fields, but you can never change the datatype
- if you want to print serverside, you need to name the QuickLists including a UUID so that the print process does not mix the lists.

Let me show you ...