HL7 v2 Segment Map

Segments, key fields, delimiters & the MSH numbering gotcha

Objective: Read an HL7 v2 message — identify the segments and the fields that matter.

Common segments & their key fields

Seg	Name	Key fields
MSH	Message header	9 type^event · 10 control id · 11 P/T · 12 version
EVN	Event type	1 event · 2 recorded date/time
PID	Patient identification	3 MRN · 5 name · 7 DOB · 8 sex · 11 address
PV1	Patient visit	2 class (I/O/E) · 3 location · 7 attending
ORC	Common order	1 order control · 12 ordering provider
OBR	Observation request	4 universal service id · 7 observation date
OBX	Observation / result	2 value type · 3 code · 5 value · 6 units · 8 abnormal flag · 11 status
AL1	Allergy	3 allergen · 4 severity
DG1	Diagnosis	3 code · 6 type

Delimiters (declared in MSH-1 / MSH-2)

- **|** — Field separator (MSH-1)
- **^** — Component separator
- **~** — Repetition separator
- **** — Escape character
- **&** — Sub-component separator

Message types & the numbering gotcha

- ADT = admit/discharge/transfer · ORM/OMG = orders · ORU = results · SIU = scheduling · DFT = charges · MDM = documents · ACK = acknowledgement.
- MSH-1 IS the field separator '|' and MSH-2 is the encoding characters — so for MSH (only), field n sits at split index n 1. Every other segment: field n = split index n.