# Dialog Management - Knowledge Integration Interaction

The interaction between DM and KI aims to (i) feed the Semantic Archival (SA) component, through the Ontology Annotation (OA) component, with information relevant to user’s emotional state and input sentences, and (ii) to provide information about the current user state to the DM. The information about the user’s emotional state and input sentences is used by the underlying ontology-based reasoning mechanisms for decision making and generation of pertinent outputs, such as missing information or final reasoning results on the identified topic. This output serves as foundation to decide on the next system action for the DM.

More specifically:

* **Dataflow 15 & 17:** OA provides a REST endpoint (HTTP POST) that can be used by DM (request stream 15) to send contextual data regarding
  1. emotions (in XML)
  2. speech act (CONLL-U/XML)
  3. sentence analysis (CONLL-U)

and gets as response (response stream 17) an ontology-based description (RDF/OWL) of the current state. The content of the response data/state may refer to additional input needed by the underlying reasoning mechanism in order to provide meaningful results, or the state (reasoning result) per se.

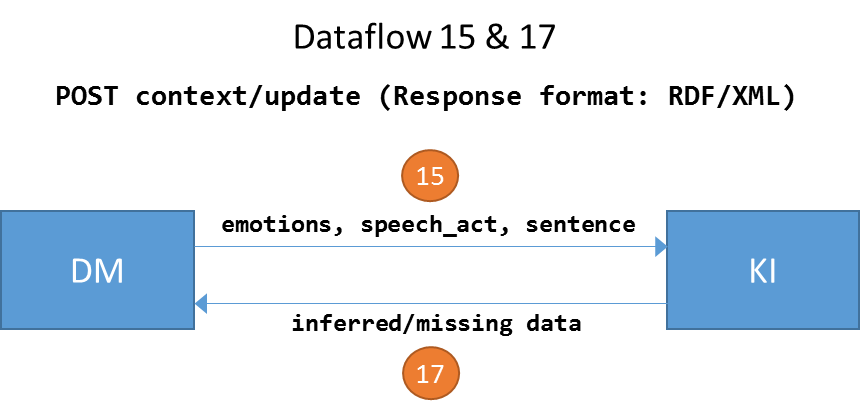
**POST context/update (Response format: RDF/OWL)**

**Parameters**

emotions: encoding XML

speech\_act: encoding CONLL-U/XML

sentence: encoding CONLL-U



* **Dataflow n1 & 19:** KI provides a REST endpoint (GET HTTP) that can be used by the DM to get a response that will be sent to the Spoken Language Generation component. As such, DM sends (request stream n1) data regarding
  1. Speech act (in XML)
  2. Missing/Inferred information (in RDF/OWL)

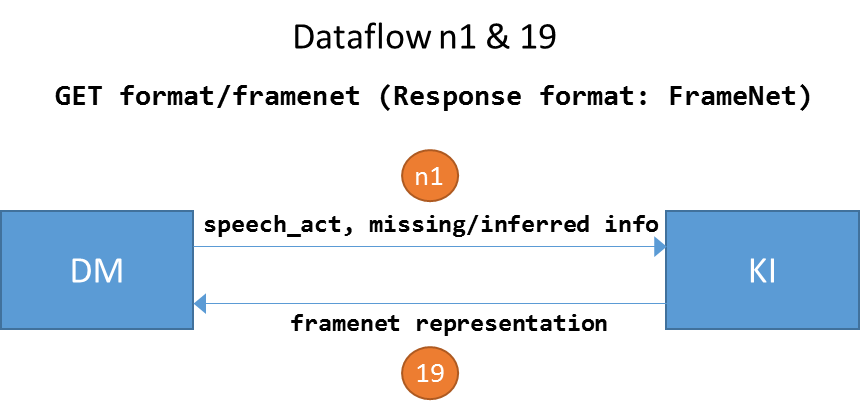
and gets as result (response stream 19) the syntactically structured response (in FrameNet) that will be forwarded to the Spoken Language Generation component

**GET format/framenet (Response format: FrameNet)**

**Parameters**

speech\_act: encoding XML

info: encoding RDF/OWL



* **Dataflow n2 & 29:** The requirements of this interaction are not clear yet and therefore the implementation of the pertinent interface may be given a lower priority. Here is an initial specification:

The aim of this interaction is to provide information about a requested topic or state, so as to trigger any alert and feedback mechanism, based on the information obtain from KI. To this end, KI provides a REST endpoint (GET HTTP) that van be used by the DM to query KI and get data (request stream 19) for a specific topic by sending an RDL/OWL description of the requested query context (request stream n2).

**GET context/query (Response format: RDF/OWL)**

**Parameters**

query\_data: encoding RDF/OWL

