

Entities

Intents are actually implicit entities

Not all implicit entities are intents

Two types of entities:

- * Explicit
- * Implicit

Four common scenarios:

- * All slot entities present
- * One+ slots unfilled
- * One+ slots implicit
- * Intent not recognized

Implicit entities/intents fall in 2 categories:

- * Structured (i.e., parsable to Struct.Q)
- * Unstructured (not parsable)

```
{
  "examples": [
    {
      "utterance": "check money in 0000 acct pls",
      "Intent": "fetchBalance",
      "entities": [
        {
          "name": "accountNumber",
          "value": "0000"
        }
      ]
    },
    {
      "utterance": "the last transaction on credit c is fraudulent",
      "Intent": "reportFraud",
      "entities": [
        {
          "name": "Ordinal",
          "value": "last"
        },
        {
          "name": "account",
          "value": "credit"
        },
        {
          "name": "merchant",
          "value": "???"
        }
      ]
    }
  ]
}
```

Task based assistant core challenges: NLU

Robust language sensing

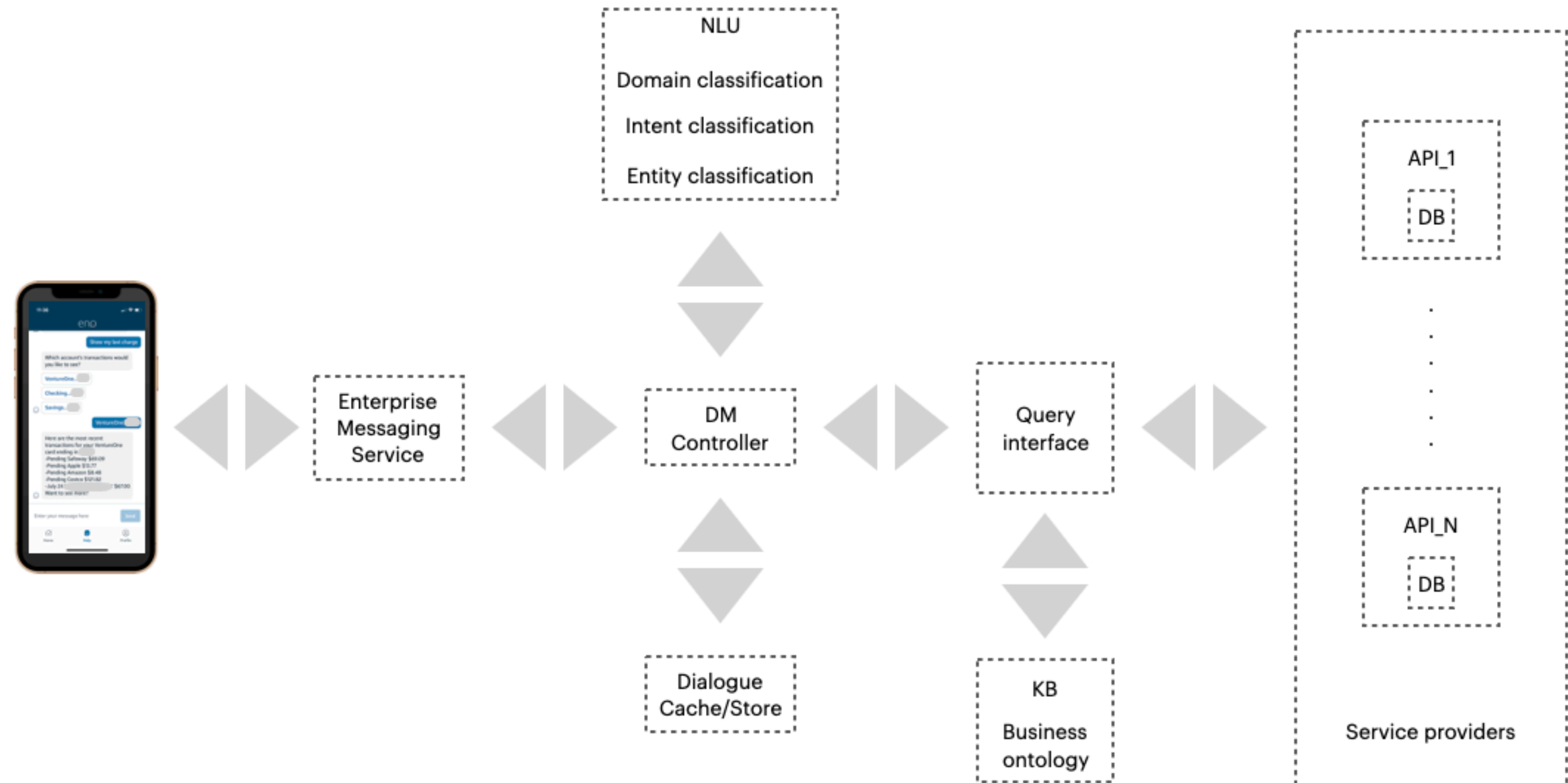
- * Spoken vs typed
- * Slang vs formal
- * Typos & dialects
- * Microphone quality
- * Intent, entity, domain rec.
- * Implicit entities

Dialogue state management

- * Efficient slot filling
- * Multi intent requests
- * Contextual awareness

System scale

- * Multi-domain support
- * 3rd party integrations
- * Performance



Generic dialogue system architecture