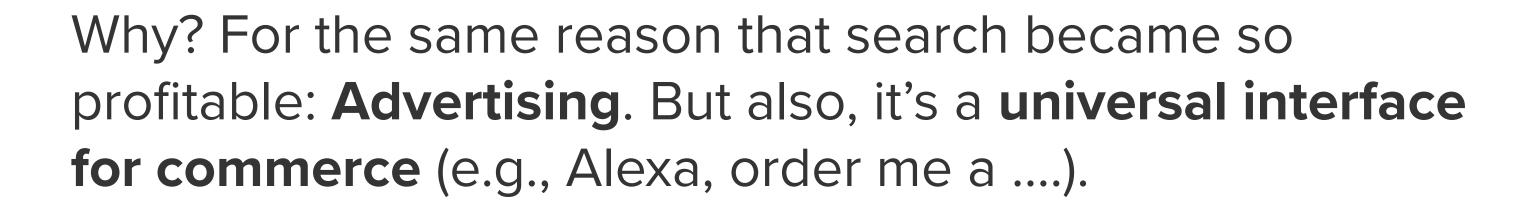
Task-based assistants

Als largest impact on society will be from virtual assistants!

- * Alexa (Amazon)
- * Siri (Apple)
- * Google Assistant (Google)
- * Eno (Capital One)
- * Erica (Bank of America)



Task based systems actually encompass all three interaction modes:

- * Answer general questions (limited domain)
- * Complete tasks (e.g., dinner reservations, book flights, weather forecast etc.)
- * Engage in chitchat when prompted









Domain-Intent-Slot model for task-based dialogue

A *domain* refers to what topic or subcategory of tasks the user is referring to.

An *intent* represents some discrete goal that a user is trying to accomplish.

Intents require varying amounts of information in order for a particular action to be taken. These pieces of information are referred to as **slots**.

It is the job of the natural language understanding engine to extract the relevant *entities* from the utterance in order to fill each of the slots necessary to complete the task. This is referred to as *slot filling*.

```
{
    "fetchBalance": {
        "accountType": "credit",
        "accountNumber": "0000-0000-0000"
    }
}
```

Example of the intent **fetchBalance** and slots {**accountType**, **accountNumber**}