**Notes of “Google's Neural Machine Translation System”**

**Type**

**Article**

**Topic**

Translation

**Notes**

**Usable Quotes or Figures**

**Summary**

A google publication that provides information on Google’s developed version of NMT known as GNMT. NMT stands for Neural Machine Translation which is a different approach to translating information. It instead translates larger amounts of data such as sentences to maximise the chances of it maintaining the desired context post translation. PBMT (Phrase-Based Machine Translation) has been the industry de facto for years which uses the “phrasebook” style of analysing phrases of varying length and translating it’s equivalent. PBMT has always surpassed NMT in terms of successful results however Google have been worked on dealing with the three major flaws NMT has. 1. “Slower training and inference speed”, 2. “Ineffectiveness in dealing with rare words”, 3. “sometimes failure to translate all words in the source sentence”. Their approach to resolving this is included in the release of their recent version of GNMT, in which they claim has reduced errors by an average of 60%. Speech recognition will provide the user input in the form of string which is then sent with an API key in a URL request to google for translation. The result is returned in the form of string, which is then converted into speech via speech synthesis.