

Machine translation

11 November 2016, CIWEM

Agenda

- 10:30 Introduction
Background, history - **Nigel Goffe**
- 11:10 Break
- 11:25 The LSP view – **Anna Norek**
- 12:15 LUNCH
- 13:30 Setting up an MT engine – **Dragoş Ciobanu**
- 15:15 Questions/panel session
- 16:00 Close



MT - background/history

- Brief history
- Rule-based MT
- Statistical MT
- Other approaches
- Personal experience
- The MT landscape
 - Threat or opportunity?



MT - timeline

- 1947-54: pioneering steps - RU-EN
- 1954-66: continued research/optimism
- 1966-80: ALPAC report ‘little progress’
 - Federal funding stopped
- 1980s: Commercial developments
 - Rule-based/interlingual
- 1990s: Early SMT
- 2000s: Steady growth in use of MT



The key to world peace?

(Schenectady Gazette, Jan 7, 1954)

Newest Electronic Brain Even Translates Russian

NEW YORK, Jan. 7 (AP)—The International Business Machines Corp. put its ingenious electronic brain to work on language today and came up with a new kind of translator.

Give the brain a sentence—any old sentence—such as this one in Russian:

* * *

"MYEZHDUNARODNOYE ponyimaniye yavlyayetsya vazhnim faktorom v Ryeshyeniyl polytylchivskylx voprosov."

It'll be tossed back at you in English in 10 seconds.

The arrangement is mostly the doing of Dr. Leon Dostert, chairman of Georgetown University's Institute of languages and linguis-

tics, and Dr. Cuthbert C. Hurd, director of IBM's applied science division.

What Dostert, Hurd and their aides have done is produce an electronic "pony"—that little book you used back in high school to help you pass your Latin course. This one's a bit larger, though.

It consists of 12 machines weighing tons each and was introduced last year by IBM as its type 701 electronic data processor. Type 701 is the rig that takes seconds to do an equation that would take you a lifetime.

* * *

JOINING IN 701'S public unveiling as a translator at IBM headquarters today was Thomas J. Watson, IBM board chairman.

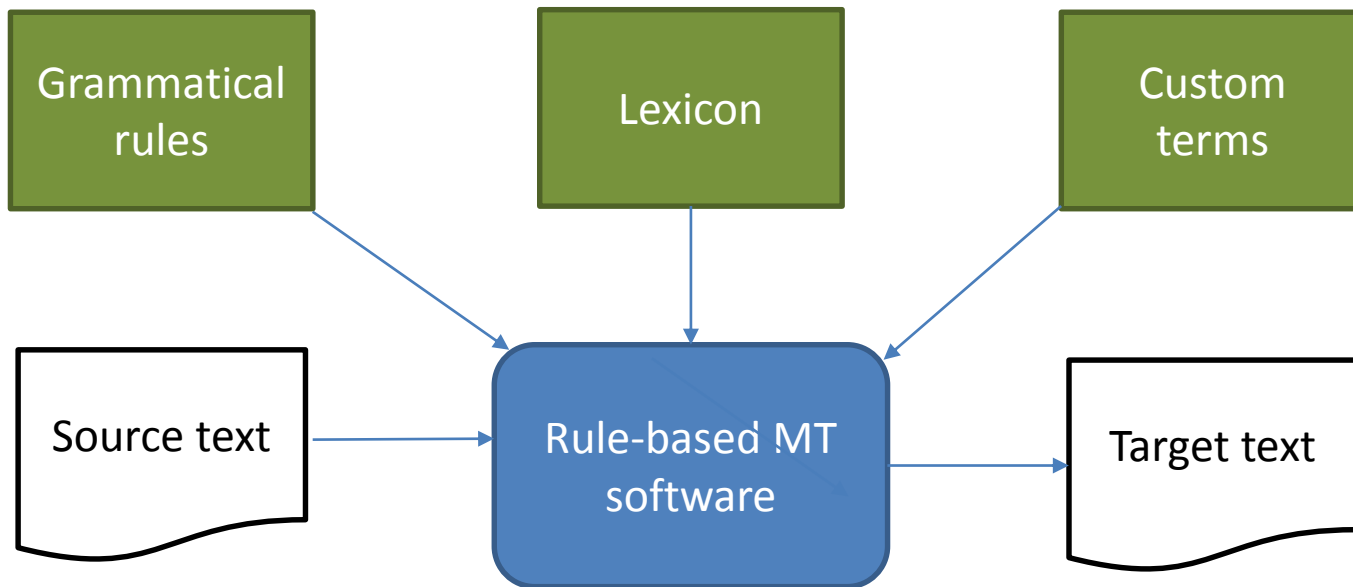
"I see in this an instrument that will be helpful in working out the problems (of world peace)," he declared. "We must do everything possible to get the people of the world to understand each other—as quickly as possible."

Dostert, who was in charge of installing the original simultaneous translation system at the United Nations, echoed the thought.

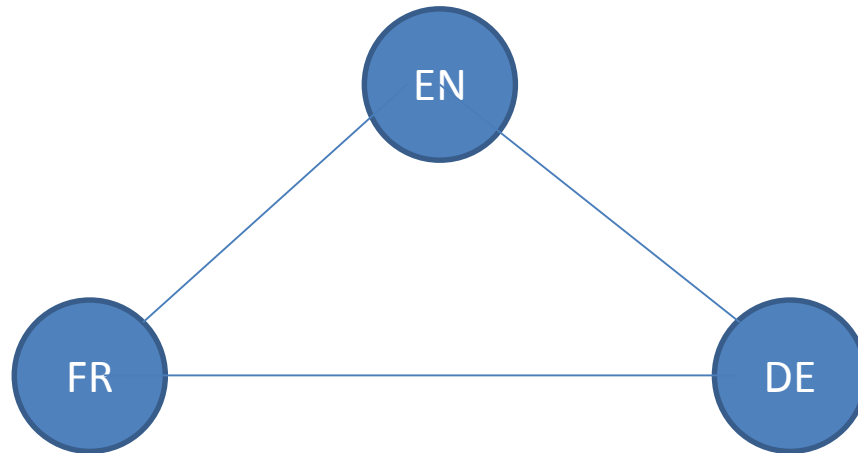
*Ter Bush
and Powell*
INSURANCE



Rule-based MT



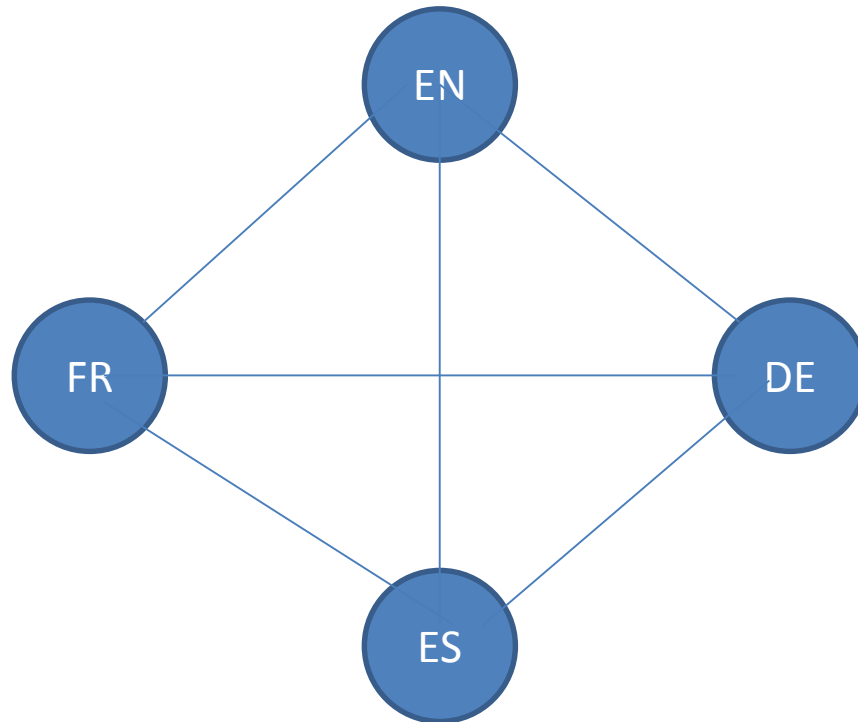
Rule-based MT



3 languages – 3 x 2 translation directions



Rule-based MT



4 languages – 6 x 2 translation directions



Rule-based MT

6 languages – 15 x 2 translation directions

10 languages – 45 x 2 translation directions

24 languages – 276 x 2 translation directions

... etc.



Interlingual MT



n languages – n x 2 translation directions

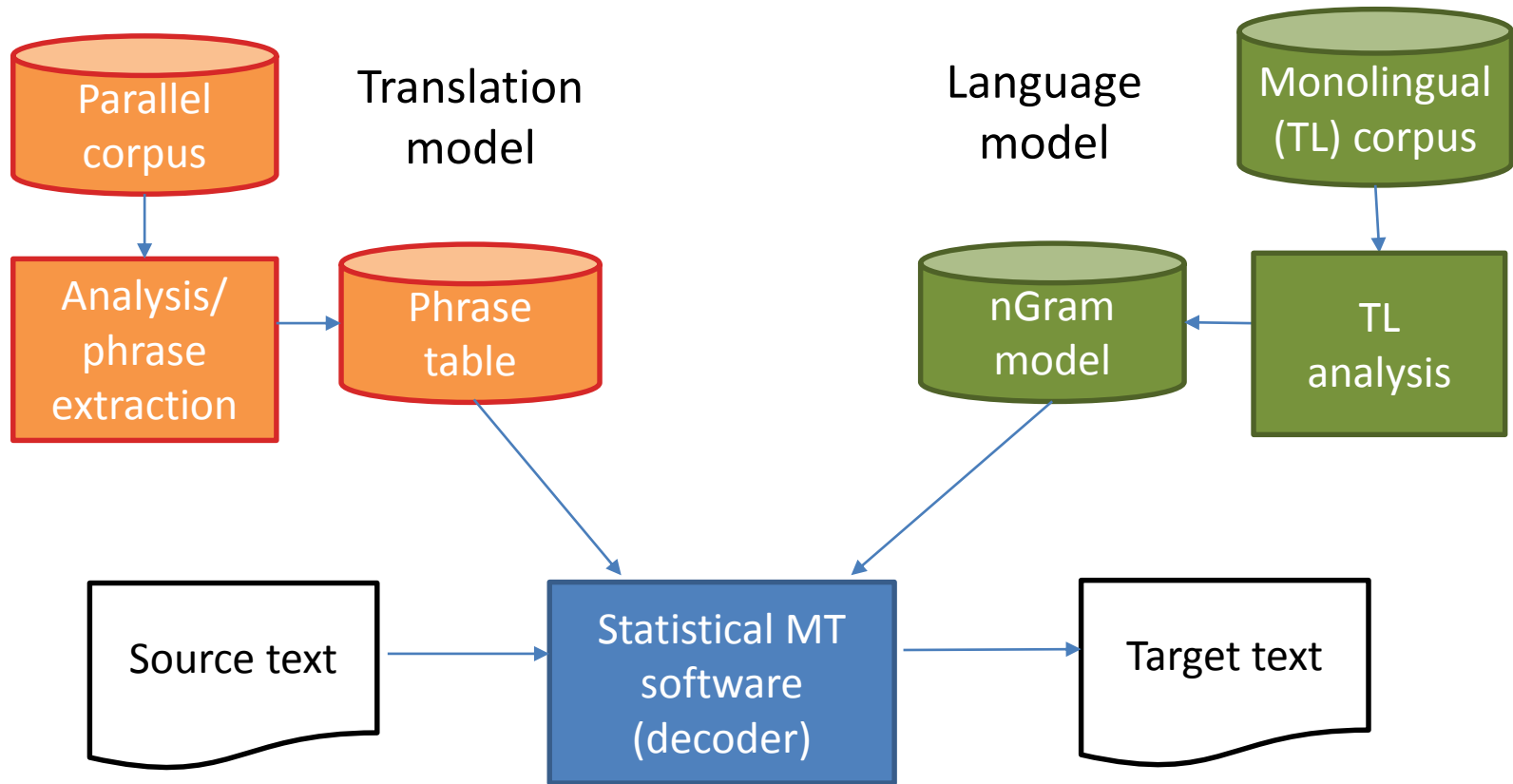
24 languages – 24 x 2 translation directions

+ SL analyser independent of TL generator

- Hard to define interlingua



Statistical MT



Personal experience

- Multilingual help desk
- Automotive assembly instructions



MT - threat or opportunity?

