Current status and future expectation for Machine Translation

Japan Patent Office
Susumu Bani
Ongoing MT services and our prospect

**English Databases on IPDL**

1. Patent Databases
   - **DB with Machine Translation Service**
     - Patent & Utility Model Gazette DB
     - Patent & Utility Model Concordance
     - FI/F-term Search
   - **Human Translation Database**
     - Patent Abstracts of Japan (PAJ)

2. Design Database
   - **DB with Machine Translation Service**
     - Design Gazette DB

3. Trademark Database
   - **Human Translation Database**
     - Japanese Trademark Database
     - Japanese Figure Trademarks
     - Japanese Well-Known Trademark
     - List of Goods and Services

**Industrial Property Digital Library (IPDL)**

- Patent Databases with MT service
- Design Database with MT service
- Trademark Databases
Ongoing MT services and our prospect

AIPN
(Advanced Industrial Property Network)
- Japanese examination-related information is available for inspection in English by means of Japanese-English machine translation
- Available for foreign IP offices
- Free of charge

Advantageous effect
1. Reducing burden on examiners in foreign IP offices
2. Accelerating quick examination and acquisition of the right

36 Foreign IP offices

Corresponding applications

Japanese - English machine translation

Applicants

JPO
Ongoing MT services and our prospect

Prospect of MT services in JPO

Cross-lingual retrieval system

JPO has a plan to establish “Cross-lingual retrieval system” which enable to search Chinese and Korean documents. JPO has conducted researches for the system.

- Evaluation of the effectiveness of the two translation methods (Keyword translation, Contents translation)

**Keyword translation**

Query in Japanese is translated into Chinese or Korean in each transaction for search. Patent documents, written in the original language, are searched by using translated query.

**Contents translation**

Original patent documents are translated into Japanese and stored into database in advance. The translated databases are searched by using query in Japanese.

- Evaluation of translation results (Korean-Japanese, Chinese-Japanese)

**Korean-Japanese**

>> Translated sentences are fairly understandable. (practicable level)

**Chinese-Japanese**

>> Further development is needed. (especially, enrichment of the dictionaries)
Benefits and challenges of MT peculiar to patent translation

**Benefits**

Further development is needed but MT is playing important role for work sharing among IP offices and IP information dissemination in English via AIPN and IPDL.

Accurate MT enable to reduce translation cost and increase amount of IP information provided in English.

**Challenges**

Availability of text data of foreign IP documents.

Further accurate translation of long sentences, specific expressions and technical terms are longstanding subject in IP documents.

Improvement of accessibility to foreign IP documents are important issue, especially Chinese and Korean documents.
Future expectation for MT

Other patent processing tools/function coordinating with MT

JPO would like to introduce accurate Chinese-Japanese, Korean-Japanese MT as an essential function of cross-lingual retrieval system, for the time being.

Future expectation:
How far do you think we can expect to go?

Further development of existing Japanese-English MT system through consistent effort.

Expansion of languages to be translated