

# The Optimized Language Solution



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Services

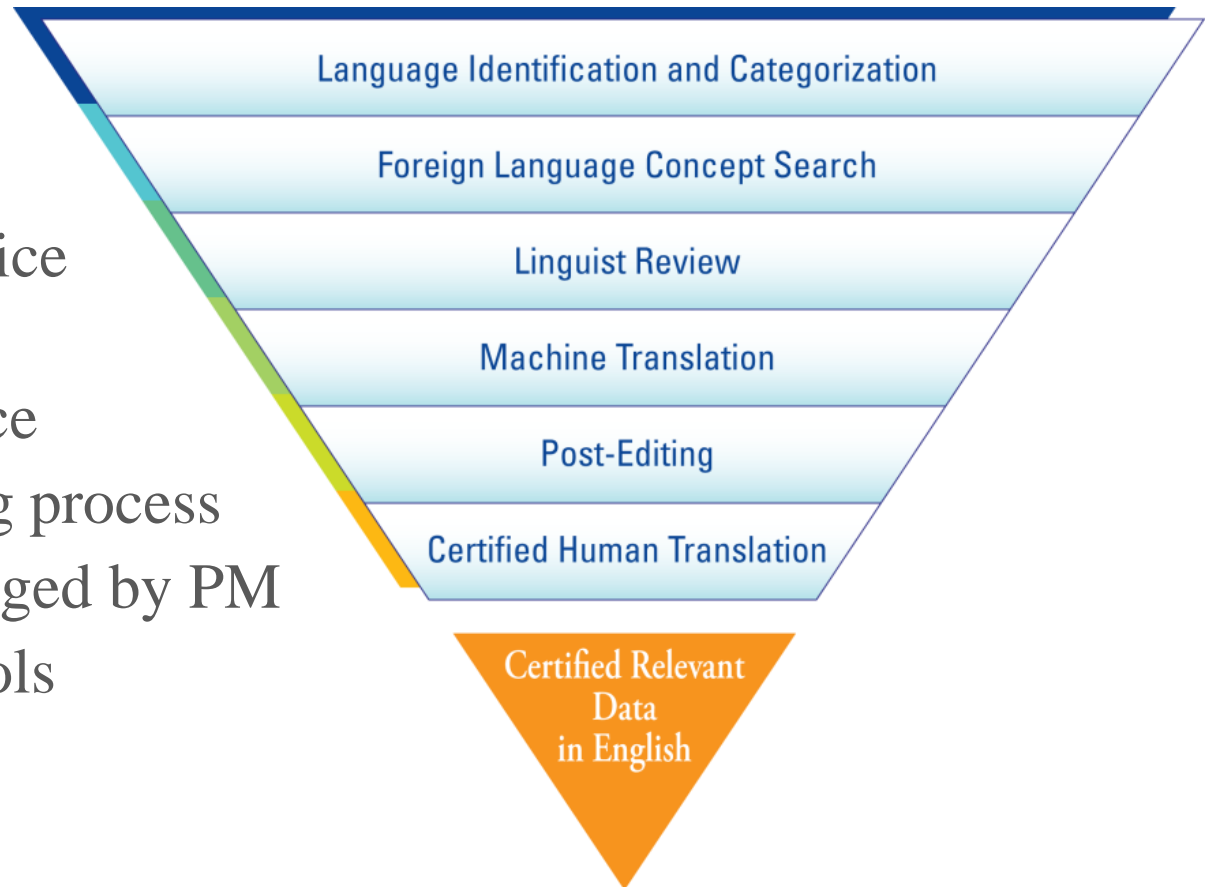
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Providing Relevant Data  
in English from a Mass of  
**Foreign Language**  
Documents

# Optimized Discovery Translation System

- Language Service Provider
- Art over Science
- Iterative culling process
- Linguists managed by PM
- PM deploys tools



# Foreign Language Challenges in Discovery

Legal



Linguistic

*Technical*

# Chinese

- Traditional versus Simplified Chinese
  - Simplified: Mainland China, Singapore, Malaysia (spoken: Mandarin)
  - Traditional: Taiwan, Hong Kong, Macau, Overseas Chinese Communities (spoken: Cantonese)
  - Most patent docs written in Simplified
    - Supporting and reference can be Traditional



Syllabic – each character represents a sound  
different from Japanese  
Words made up of more characters  
in Chinese than Japanese

**Internet (simplified Chinese): 互联网**

**Internet (traditional Chinese): 国际网路**

# Acronyms

- Chinese **Acronyms**

Beijing University: 北京大学

Usual abbreviation: 北大

# Japanese

- 3 Character Sets / 5 scripts
  - Hiragana(phonetic) / Katakana(phonetic) / Kanji (pictographic)
  - Roman characters / Numbers 0-9

SOV language (Subject Object Verb)

Dates: Years relate to Emperor 1990 = Heisei 1;  
2009= Heisei21

Names: Watanabe 渡辺 渡部 渡邊 渡邊

Honorifics – indicate superior / inferior relationships

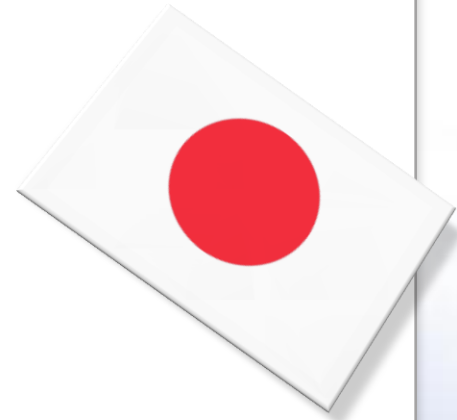
verb endings change

name suffixes change

Customers/audience always superior

Borrowed words: 90% from English into katakana

ダース dozen



# Korean

- SOV language
  - Ambiguity persists; subject and object omitted
  - Searching needs to take this into account

Honorifics – indicate superior / inferior relationships

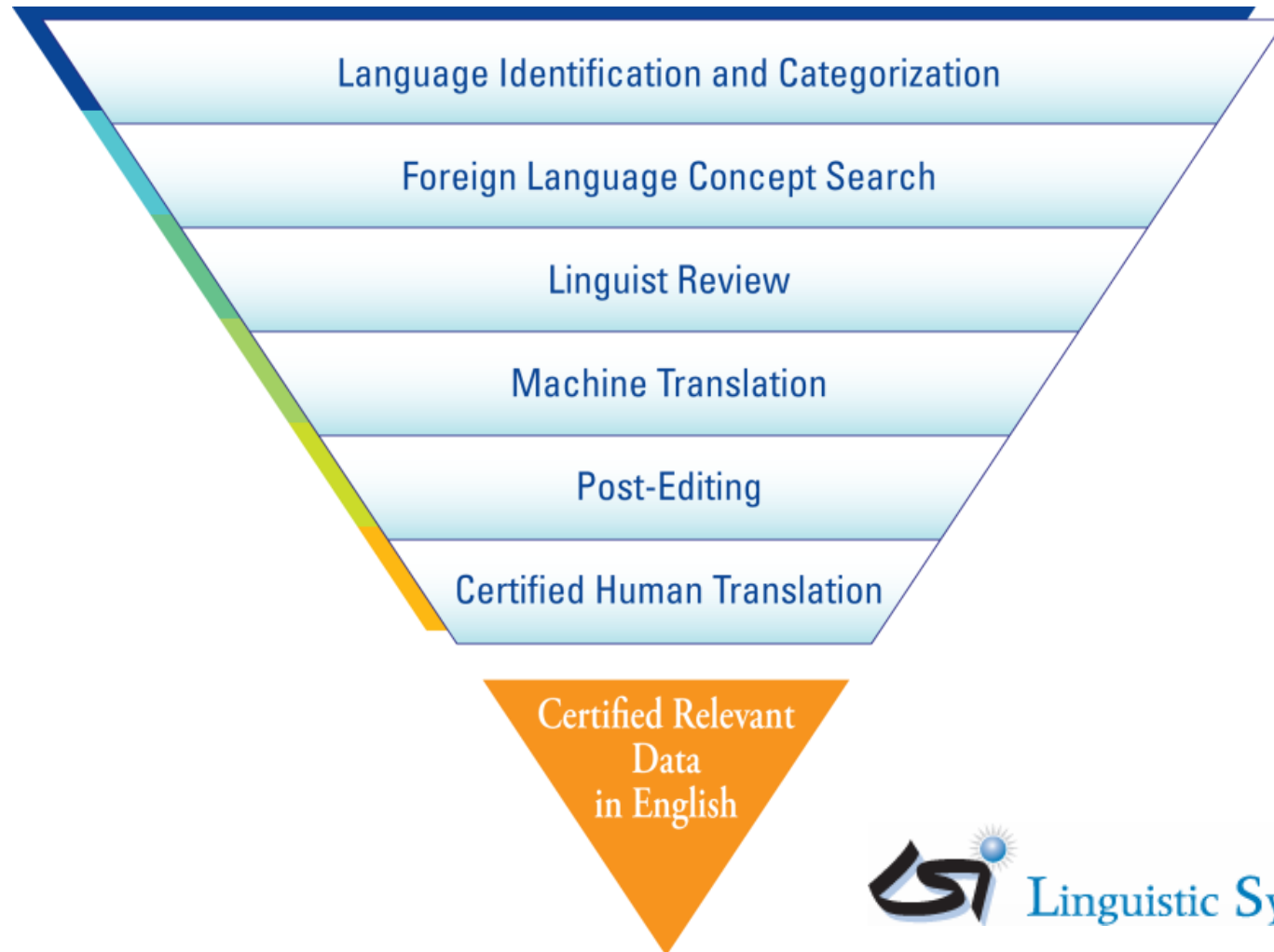
Customers/audience always superior

Numbers: one native, one borrowed from Chinese, Arabic

Borrowed words: dozen' > 다퍼스 *dāsu* > 님스 *daseu*



# Language Processing Model



# Language Service Provider

- Sole purpose: Facilitate communication
  - Tools: Translation, MT, Interpreting, Linguist Review, Abstracting, Search result summarize

Search/Review is a language communication project

Inherently iterative requiring optimized system

# Project Management

- LSP model – PM managing LP (Coaching)
  - LP part time on many projects
  - LP is freelancer
  - Subject matter expertise ( Manual v. Contract)
  - PM divides/distributes; knowledge of working speed
  - Daily Webex; Glossary development for terminology
  - PM is a subordinate part of case team

Review Management Model – Experienced team leader  
(mentoring)

# Search Term Translation

- Translate/apply to native text
  - Linguist required to research reference
  - Name spellings vary – native spellings from business card
  - Place / Region abbreviations
  - International Standards not standard domestically
- U-TOC (User Table of Contents) vs. ユーザズトック
- Linguist research/reference material
  - IP matter yielded hundreds additional hits

# Review speed

- CJK moves 25 – 33% slower
- QA moves 50 – 100% faster
  - QA strategy 20 / 10 / 2

# Remote Review/Low weekly hours

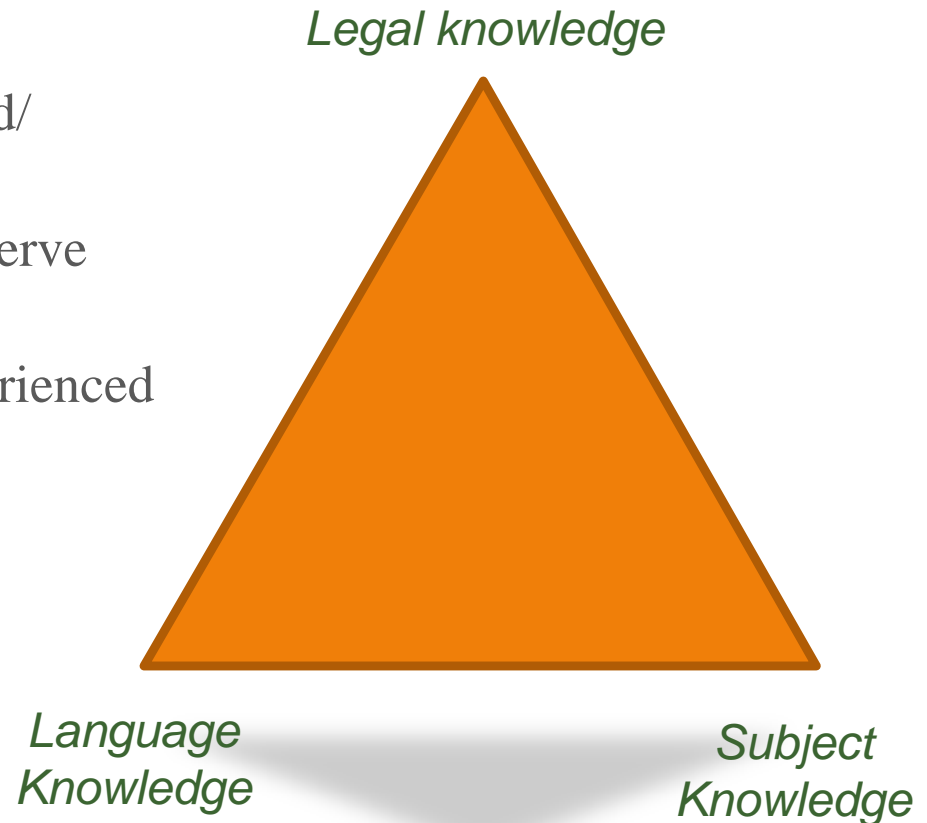
- Web-based review tool like IPRO
  - Training conducted online for LPs
  - Time tracked measured v. established metrics
  - Build teams 5-10X faster
- Boston Law Firm Case
- Review team in Boston/NYC office only
- Required 40-50 hrs. per week

# Reviewer Experience

- Speeds of 60-120 pages per hour
- Familiarity with review tool; training
- Pitfall of internal review Build v. Buy  
(Taiwanese company case)

# Linguist Reviewer Qualifications

- Select your team based on Qualifications (Junior/Standard/Sr. Attorney)
- Dail in cost requirements/conserves resources
- First pass can be done by experienced legal translator
- Linguist attorney reviewers
  - Head up teams
  - Handle sophisticated legal concept reviews



# Machine Translation(MT): Tool not Answer

- MT < 30% accurate; Dilutive
- European languages over Non-European
- Best Use: Doc ID
- Common Misuse: Comprehension
- GIST to direct further review/translation
- Post-Editing of MT



**Translation Value Table**

	<b>Time</b>	<b>Quality</b>	<b>Cost</b>
Machine Translation (MT)	1 sec	30%	\$0.25
Translation	1 hour	100%	\$75
MT + Post Editing	20-30 min	80-90%	\$30-40

# Human Certified Translation

- Certification myth
- Committed translator: 2000 words/day
- Ramping up team
- Reference material; previous translation
- Repeat material discounts; Equivio

# Linguistic Systems, Inc.

- Founded in 1967 as ‘The Legal Translating Service’ by Harvard Law scholars.
- Quality, accurate and prompt service; ISO9000:2001 certified
- Servicing all legal practice specialties; intellectual property, arbitration, labor/employment, litigation, trade, immigration, et al
- We have 4,000+ experienced and professional translators with strong knowledge in specific subject areas.
- We translate 115 languages.

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Thank you !