1. Motivation

ICE Experiment

World Wide Web: contribute to mutual understanding among the world.

Why don't we use Machine Translation?

Languages:
- Make international documents in their first
- Asian people cannot think in English and want to
- Neighboring languages are not enough in Asia.

Countries:
- We have serious language barrier among Asian countries

Information:
Source: Global Reach (digital-reach.com/geoindex)

- Chinese, Japanese, Korean: 26%
- English: 35%
- Italian, French, German, Spanish: 10%

It seems there is no

Kyoto University
Department of Social Informatics
Toru Ishida

Machine Translation
Using Inter-cultural Collaboration
2. Experiment

Transnational:

Korea: Transsearch
China: Transmate
Japan: Transconverse

Each country develops a multilingual look.

Translation buttons:

Message input

Selection of Interface Language

Intercontinental Collaboration Experiment 2002

October-December 2002: Software Integration
April-June 2002: Software Design

Transsearch and Transmate
Software with multilingual communication tools:

Team members never meet in person, but complete

Kyoto University (Japan)
University of Malaya (Malaysia)
Seoul National University, Handong University (Korea)
Shanghai Jiao Tong University (China)

To develop open source software in Asian countries in our
Intercontinental Collaboration Experiment 2002
3. Findings

Impact of Translation Quality

Findings

3. Findings

Wakayama University
Developed by
Peking, China
Kyoto, Japan

2. Experiment

Multilingual Chat
Multilingual Presentation
Video Conference
Synchronous Collaboration Tool
Talker

When reading
●
●
When writing (self-initiated repair)
●
Adaptation emerged

Why?
Simply because they wanted to
Communicate with each other.

And again.
Users modified their original messages again.

Self-initiated repair

# of positioning messages

# of repair trials

28 Pascal2
112 Bishesh
28 Pixel
71 Russian
84 English
66 Spanish
51 Tomoko
395 Bishesh
112 Russian

Data on TransBBS from Oct 10 to 30.
3. Findings

**Table:**

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**Note:**
- Exam results indicate improved language proficiency.
- Exam 5 shows significant improvement across languages.

3. Findings

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**Translation:**
- EX: Self-initialized repair with J-to-E-to-J.
- Allows user adaptation to their first language.
- To solve this problem, we need a tool that...
- Self-initialized repair is useless.
- User who have weak English skill find that...
- Translation: self-initialized repair does not...
- Because user's adapt to Japanese-to-English

**By Kenzo Oga**
4. Ongoing Research

Interactivity can be seen as a meta-level architecture.

Why don't you say "yes, I understand it"?

Do you really understand my message?

We cannot ignore translation errors.

My sentences, too, aren't too skillfully translated.

Let machine translator to know how well is a given sentence translated, and to know which part is not translated well.

Inaccuracy is a part of personality of MT agents.
4. Ongoing Research

Research: by Naomi Yamashita

- A gap between syntactic and semantic threads.
- Misconceptions can be predicted when there is a gap between messages.
- Generalized based on lexical similarities.
- Semantic thread - reply-to fields.
- Generalized based on references and "in-
- Discussion threads.

Predicting Misconceptions

By Naomi Yamashita

- Different countries by the number of shared lexical terms.
- Compare discussion pairs posed from the same country and from different countries.
- Different countries can have the same country.
- Same countries (Sawaya effect).
- Based on few words that stick in their mind.
- Translated message, they tend to respond when people cannot fully understand the message.

- Is continuing, and to know exist misconceptions.
- Let machine translator to know how well discussion sentences have the same meaning.
- Similarity easily becomes high when given two similar between a source-language sentence and its back translation.
- Confidence measure (C-measure)
5. Conclusion

We need a language infrastructure on the top of the Internet. We need a language infrastructure on the top of the Internet. We need a language infrastructure on the top of the Internet. We need a language infrastructure on the top of the Internet.

- To contribute to multi-lingual understanding in different countries.
- To support various intercultural activities.
- To make language resources and services accessible.
- To improve intercultural collaboration.

Machine translation is a powerful tool for intercultural collaboration.

4. Ongoing Research

- Providing specific intercultural collaboration tools.
- Developing new language resources and semantic web.
- Resolving implementation of new intercultural product rules.
- Research services on the Internet.
- Increasing accessibility and usability of language resources.