

Evaluating MT Prior to Deployment

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Insight for global market leaders

Agenda for today's presentation

- Market demand for automated translation
- Research on leading suppliers
- Next step in research project
- Rubric for choosing automated translation solution

What people ask us about MT

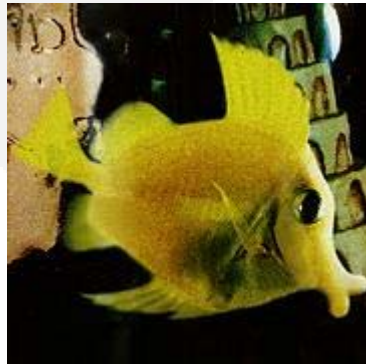
General questions:

- What is it?
- What does it cost?
- Where would you use it?
- Is it good enough to show customers?
- How can I take MT seriously?

More advanced investigators:

- Is statistical better than rules-based?
- How could I integrate it with my CMS workflow?

Where the layman's notion of MT typically comes from



What we find in our conversations with potential users of automated translation

- Potential users of automated translation technologies are not interested in academic or theoretical excellence
- They want to solve a serious problem – too many words in English, too few resources to translate
- Human translation is too expensive and too time-consuming – and it only deals with the barest minimum of what companies would like to offer their international employees, customers, partners, etc.

Our mantra: MT is a substitute for ZT

- Zero translation – we figure that 99.44% of information inside an organization never, ever gets translated
- Not to replace HT but to complement it



Where automated translation is used for international and domestic multicultural

- Corporate:

- Documentation, websites, etc.
- Customer communication and support
- Internal collaboration such as e-mail
- Search

- Government:

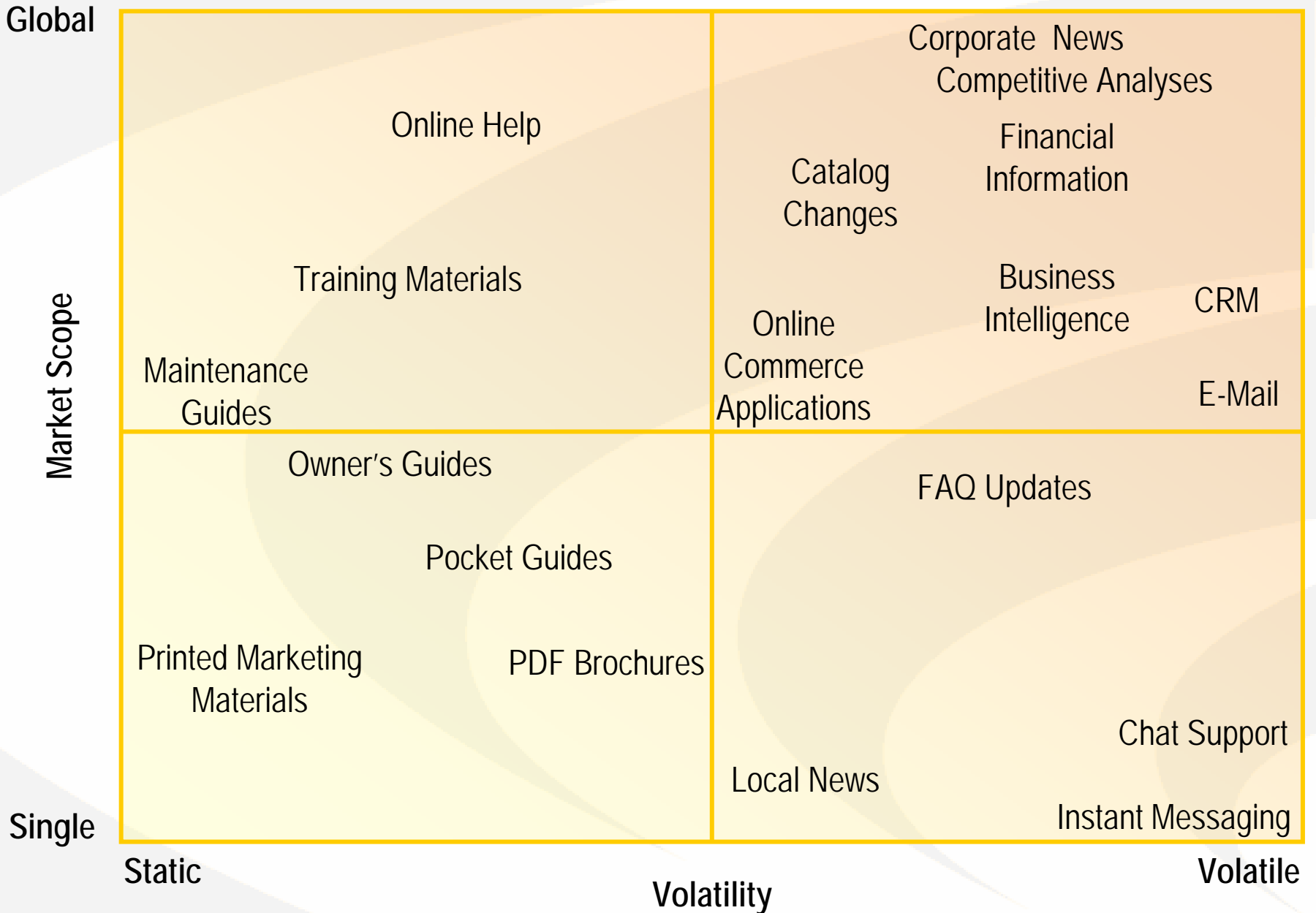
- Gisting for intelligence, open-source and otherwise
- Text mining
- Translingual Information Detection Extraction and Summarization (TIDES)

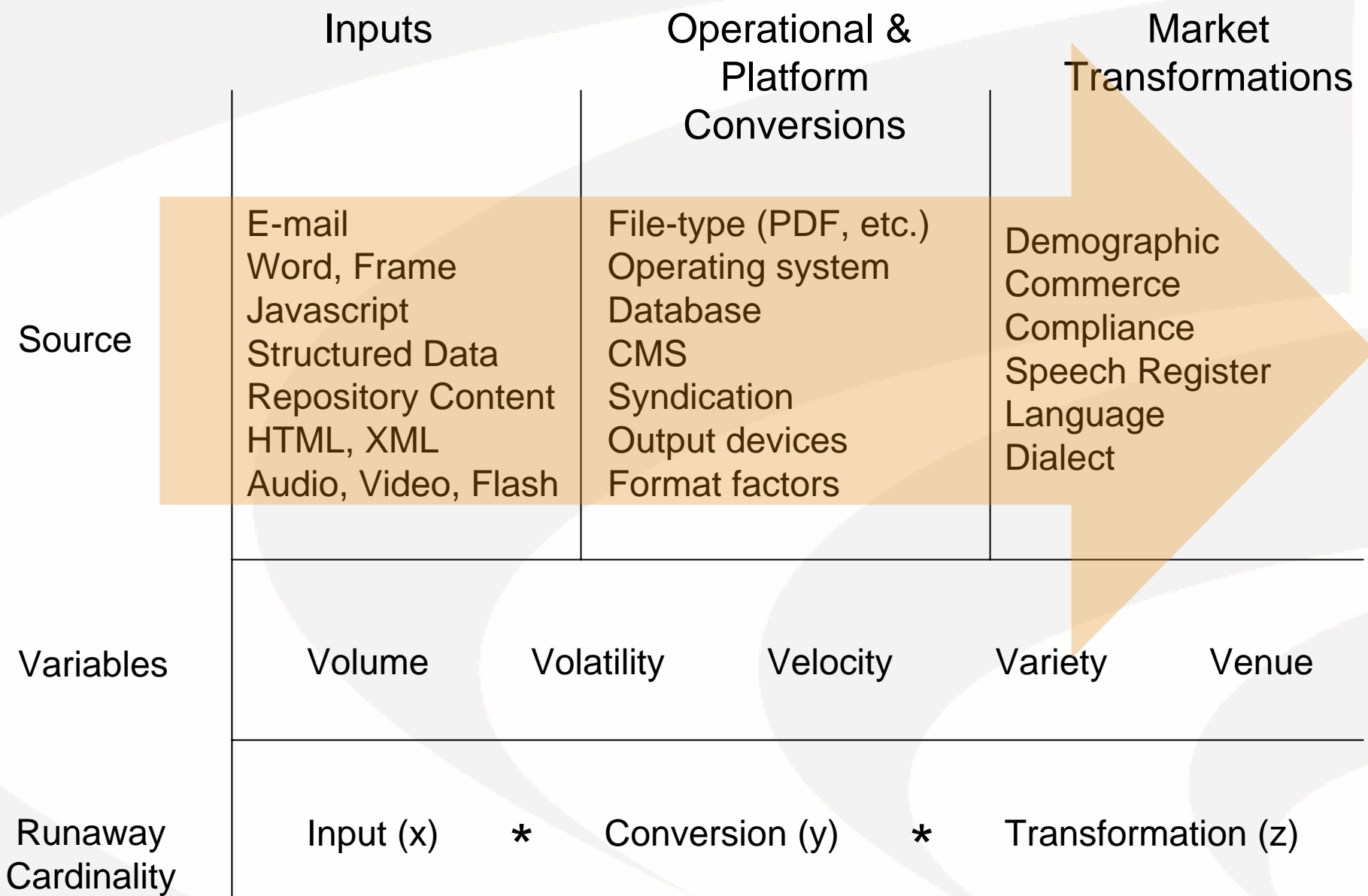
Which online retailer replied to our Spanish-language inquiry with MT?

“¡Le agradecemos por hacer compras en el baño de la cama y más allá y esperamos oír de usted pronto!”

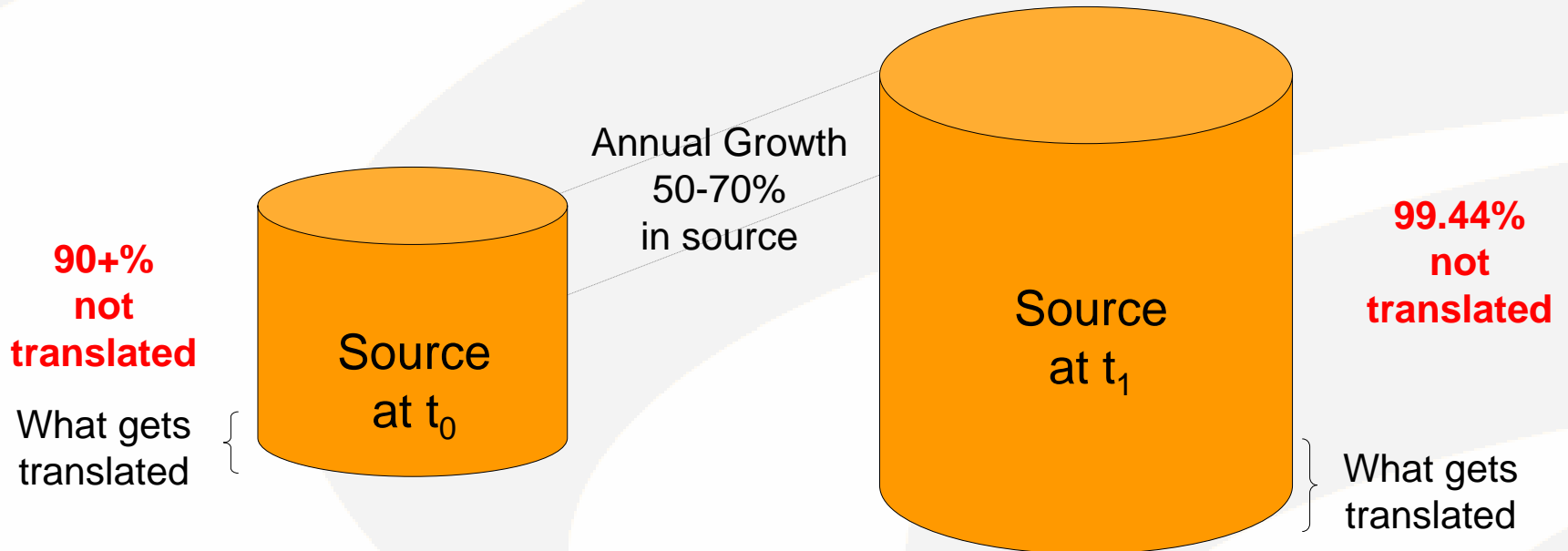
Market for automated translation tech

- Market today:
 - Direct sales less than US\$30MM worldwide
 - Some analysts estimate US\$140MM
 - But very large indirect leverage through free translation sites
- Market potential: billions and billions?
 - Direct sales growth could approach 20% per annum
 - Big driver: 50% of our 8-country sample use free translation
 - Who we are watching most closely:
 - Incumbent but at-risk free translation: Systran
 - COTS: IBM, Language Weaver, and SDL
 - Non-COTS: Google and Microsoft





HT as-is means opportunity for lots of ZT



Variables affecting what human translators can translate:

- 7.5% growth per annum translation spending
- Productivity increases from TM, termbase, authoring tools, etc.
- Source improvements due to process, QA, single source, etc.

Summary of initial conversations with users of automated translation

- Most organizations will never be able to translate more than what is legally mandated (if that) or what the bare minimum that marketing requires
- They will wring their hands in anxiety about English or nothing, rarely considering an MT solution
- They worry about quality, cost, and integration

What we researched

- Leading and/or representative vendors and potential suppliers:
 - IBM
 - LEC
 - Language Weaver.
 - Microsoft Research
 - PROMT
 - SDL
 - SYSTRAN.
 - Verbalis
- Report in early September:
 - Introduction to the topic from a buyer's perspective
 - In-depth questionnaires with follow-up interviews
 - Rubric for evaluation
- Later this fall:
 - Use cases "Lessons in Automated Translation"
 - Still soliciting cases
 - And willing to ask some questions on your behalf

Research agenda for each solution

- Basic operations: Support for global compliance, dictionary creation and maintenance, system customization, post-editing environments, and translation throughput.
- Advanced Operations: Existence of quality control metrics, authoring systems, batch translations, MT integration with OCR systems, and adaptation to spoken language.
- Differentiating Features: Innovative engineering and translation features.
- References: Case studies (November report).

Evaluation criteria

For techies:

- Systematic human evaluation
- Automated evaluation
 - Bilingual Evaluation Understudy
 - NIST
 - F-Measure

For mere mortal companies:

- Science fiction
- In-flight magazines
- Free translation sites
- Desktop MT tools
- Consultant recommendations

1. Determine translation needs

- What do you want to translate?
- How good does the output have to be?
- How good is the source?
- How frequently does it change?
- What language do you need it in?
- How is the information stored?
- How will you know whether succeeded?
- How will offer automated translation?

2. Determine requirements

- Which operating system will it run on?
- Do you plan to integrate the system with other applications?
- Which corporate or industry standards apply?

3. Plan for customization

- Can MT be tuned to domain needs?
- Do you have a terminological database?
- Does the termbase match the MT's dictionary requirements?
- Do you have the necessary skills in-house for developing dictionaries?
- If you are considering SMT, do you have access to bilingual training corpora?

Conclusions

- Lots of popular misconceptions
- Small market today with big potential
- Deployment success depends on doing the homework rather than defaulting to leaders

Thank you.

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