

Multidimensional Quality Metrics (MQM)

A New Framework for Translation Quality Assessment

Arle Lommel (DFKI)



Funded by the 7th Framework Programme of the European Commission through the contract 296347.



QTLaunchPad is an EU-funded project to lay the ground for systematically **identifying and addressing the barriers to high-quality translation.**

Many ways of assessing quality
= **no agreement**

The problem with BLEU/ many reference methods



Increased BLEU score but
no substantial improvement for human use

The problem with BLEU



Substantial human improvement but no BLEU increase

MT methods require
reference translations:
Cannot be used for
production purposes

Human quality assessment
takes too much time
and is not principled

Wait a minute...
**What do you mean by
quality?**

Quality: A New Definition

A quality translation demonstrates required accuracy and fluency for the audience and purpose and complies with all other negotiated specifications, taking into account end-user needs.

Source: Alan Melby

Why not use a
single, shared metric?

Which one?

LISA QA Model

SAE J2450

SDL TMS

Acrocheck

ApSIC Xbench

CheckMate

QA Distiller

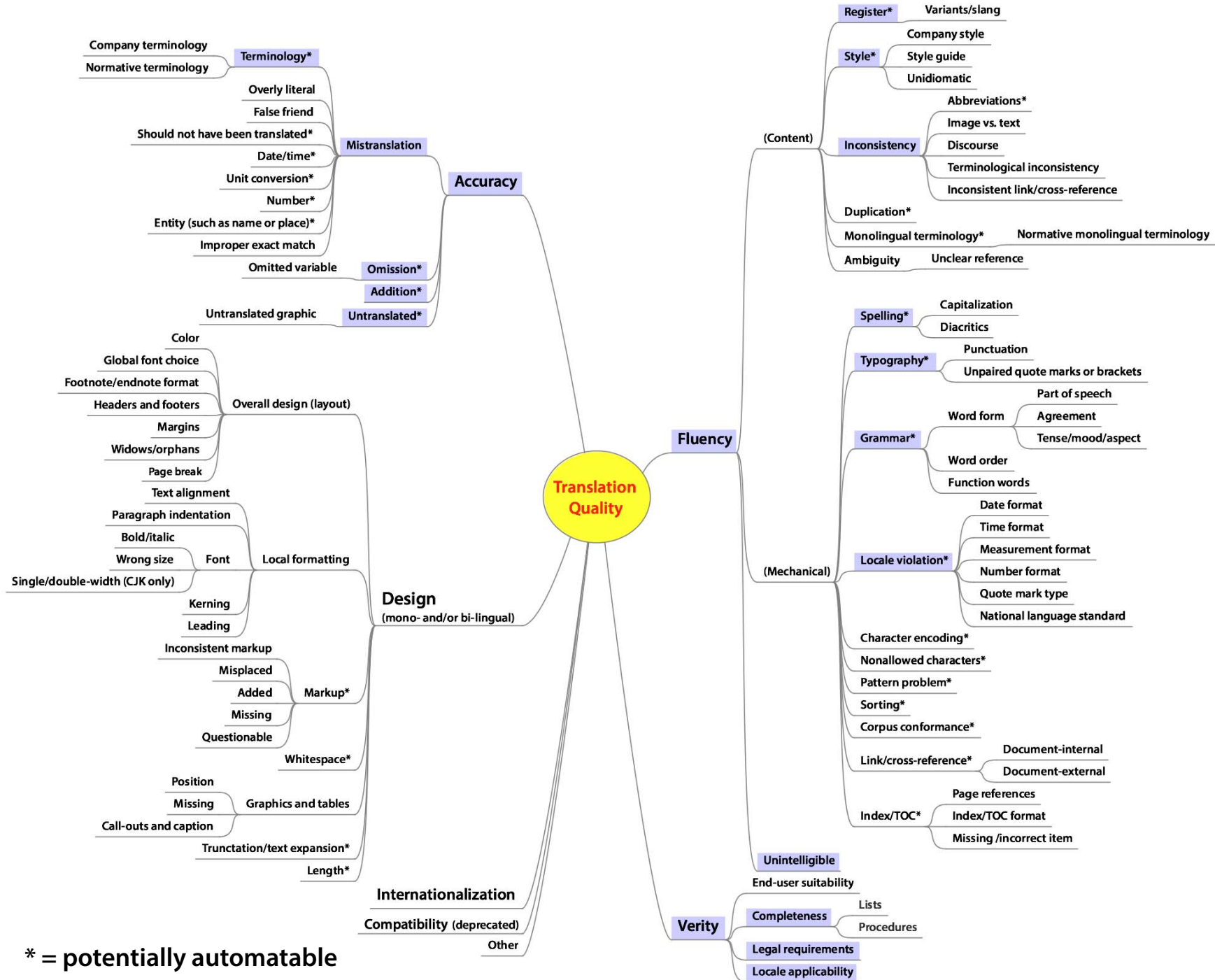
XLIFF:Doc

EN15038...

All of them disagree* about
what is **important to**
quality

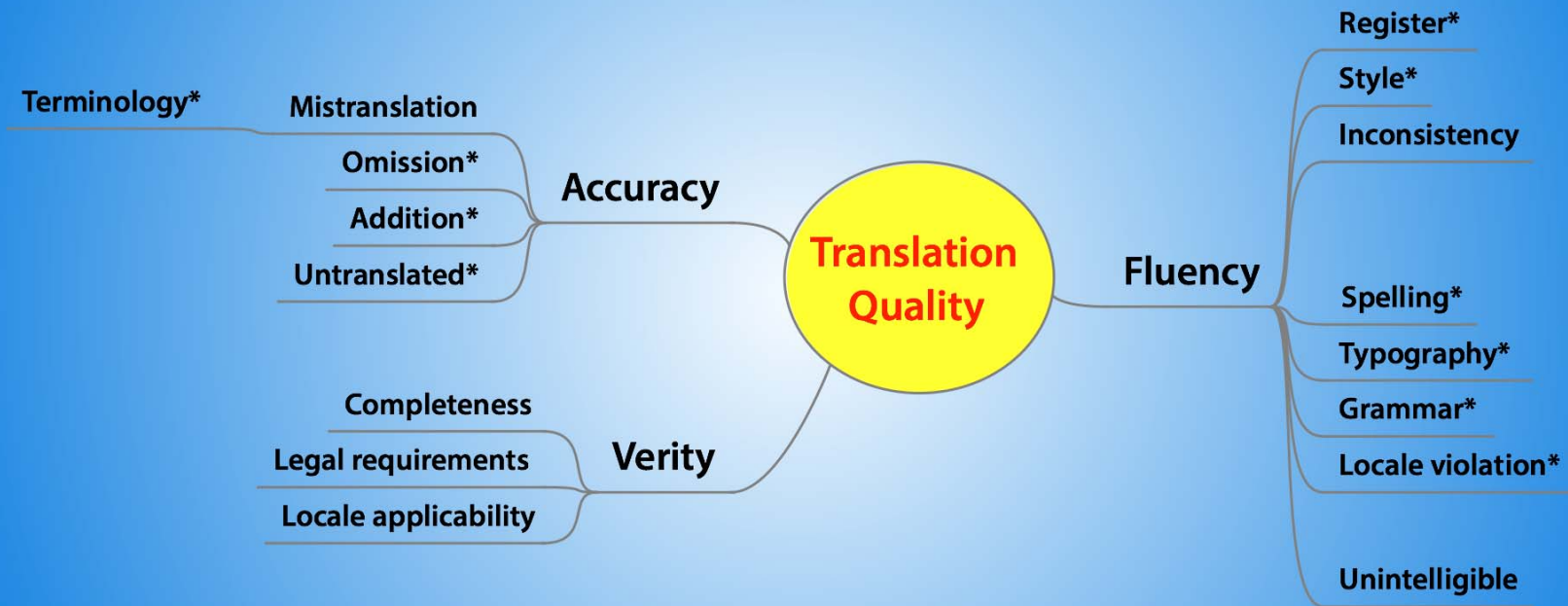
*The only thing they agree on is terminology

The solution



* = potentially automatable

Are you kidding?



The MQM Core

Don't **assume.**
Use **specifications.**

Specifications based on 12 Parameters

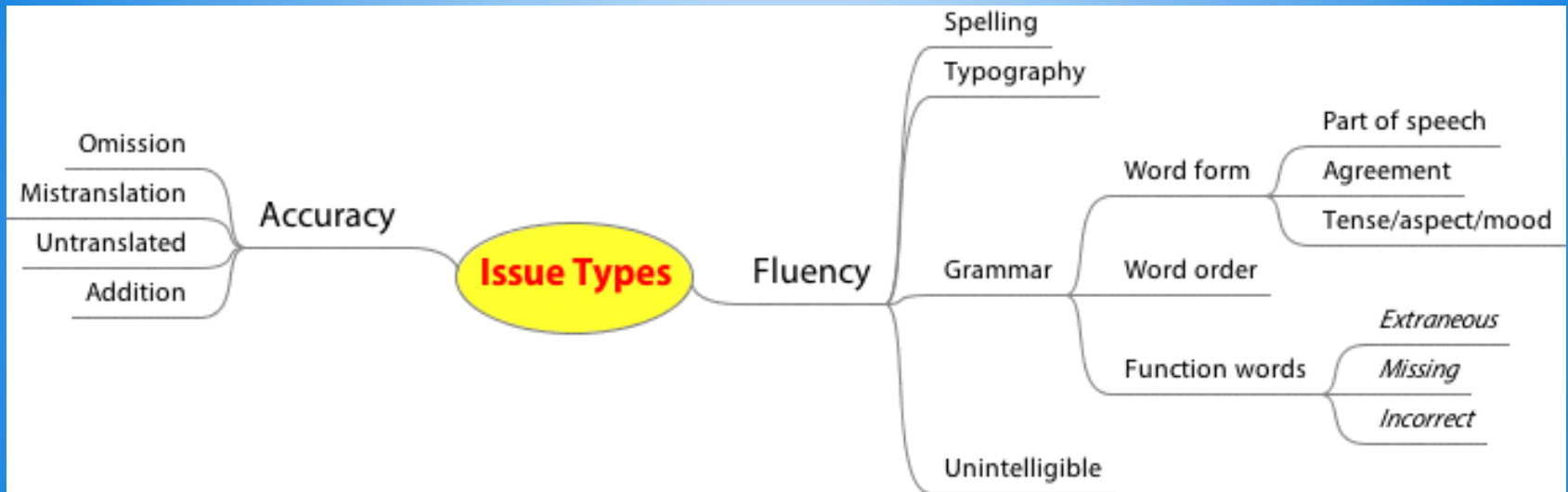
(from ISO/TS-11669)

1. Language/locale
2. Subject field/domain
3. Terminology (source/
target)
4. Text type
5. Audience
6. Purpose
7. Register
8. Target text style
9. Content correspondence
10. Output modality
11. File format
12. Production technology

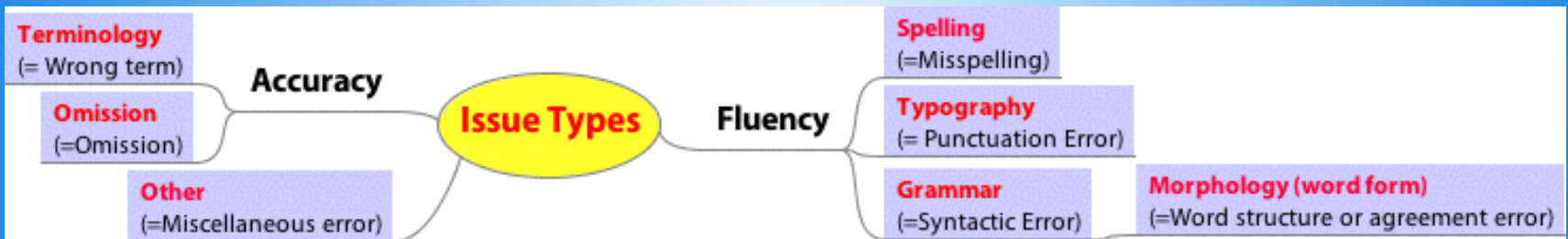
<http://www.ttt.org/specs>

You don't use all of MQM
(or its core):
you **use the**
parts you need.

MQM lets you declare your
quality metric in a **shared**
vocabulary.



MQM for MT Diagnostics



SAE J2450

Open-source and online tools

QTLAUNCHPAD

Request for and offer

No.	Source text	Target text	Target text matched	Comments
1	Neue behördliche Notizie zum Tymoshenko-Bündnis des Parlament	no identifying amendment by Parliament for Tymoshenko	no identifying amendment by Parliament for Tymoshenko	
2	Das ukrainische Parlament verweigerte heute den Antrag, im Rahmen eines Besuchs des Strafgerichtshofes den Antrag auf Freilassung des Oppositionsführers Julia Tymoschenko zurückzuweisen.	The Ukrainian parliament refused the request today to discuss within the framework of a receipt of the general state of the investigation on crime cases the opposition leader Julia Tymoshenko had been sentenced.	The Ukrainian parliament refused the request today to discuss within the framework of a receipt of the general state of the investigation on crime cases the opposition leader Julia Tymoshenko had been sentenced.	
3	Die Neuregelung, die den Weg zur Befreiung der Strafverfahren zugunsten des Justizministeriums beschleunigt, wird im nächsten Schritt der Abgeordneten bei der zweiten Lesung mit Anhörung der Regierung der Strafen für wirtschaftliche Delikte.	The new regulation, which will pave the way for the release of the imprisoned Tymoschenko would make it possible, for the second reading of the proposal to reduce the penalties for economic crimes.	The new regulation, which will pave the way for the release of the imprisoned Tymoschenko would make it possible, for the second reading of the proposal to reduce the penalties for economic crimes.	
4	Tymoschenko war im Oktober wegen des Anschlusses eines englisch-ukrainischen Energie- und Gasnetzes mit Russland über den Einkauf von Erdgas zu sieben Jahren Haft verurteilt worden.	Tymoschenko was sentenced in October one thing because of the end of the contract with Russia about the purchase of natural gas to seven years of custody sentenced.	Tymoschenko was sentenced in October one thing because of the end of the contract with Russia about the purchase of natural gas to seven years of custody sentenced.	
5	Das Urteil ist nach nicht rechtskräftig, im Dezember soll die Berufung der Verurteilten vor Gericht erneut werden.	The judgment is not legal yet, in December the appointment of the convicted persons in court is supposed to be discussed.	The judgment is not legal yet, in December the appointment of the convicted persons in court is supposed to be discussed.	
6	Tymoschenko selbst beschrieb das Urteil als politische Tat der Regierung und auch im Februar bei der Prozess der Verurteilung der Verurteilten im Gericht.	Tymoschenko herself refers to the judgment as political revenge of the regime and also in the end the process made the suspension of the sentence of the court area.	Tymoschenko herself refers to the judgment as political revenge of the regime and also in the end the process made the suspension of the sentence of the court area.	
7	Der Antrag, Paragraph 365, auf dessen Grundlage die Exekutive entschieden wurde, was dem Strafgerichtshof zu erklären, wurde von 147 Abgeordneten unterstützt.	The application, Section 365, on the basis of which Exekutive was ordered to remove from the Criminal Code, was supported by 147 deputies.	The application, Section 365, on the basis of which Exekutive was ordered to remove from the Criminal Code, was supported by 147 deputies.	

Request index data

Cancel X Save ✓ OK OK

Must be searched

OR Subsequent

ADD OR Subsequent

Acronym

Fluency

Origin

Addition

Status 1

Status 2

Status 3

Springing

In source

In target

New data

Source

Target

Comments

QTLAUNCHPAD Infrastructure: Edit Dimensions

Step 2: Define Dimensions

Section 1: Language/locale (source) and target)

The language or locale (combination of language with geographical location) of the source and target texts, e.g. the text was written in Egyptian Arabic.

*Please verify the correct source and target languages

Language Region

Source: Russian RUSSIAN FEDERATION

Target: English UNITED STATES

Does the target language pose any particular grammatical or stylistic difficulties of which you are aware?

writing system than the source? NO YES unknown

to language? NO YES unknown

target language? NO YES unknown

whether text (e.g., a pivot language translation)? NO YES unknown

id/domain

(e.g., legal, pharmaceutical, heavy equipment maintenance)

Accuracy

Accuracy (Bilingual)		Fluency				Verity	
Accuracy (Bilingual)	Fluency (Bilingual) (N)	Fluency (Bilingual) (N)	Veracity (Bilingual) (N)	Veracity (Bilingual) (N)	Verity (Bilingual) (N)	Verity (Bilingual) (N)	
TARGET	SOURCE	TARGET	SOURCE	TARGET	SOURCE	TARGET	
Terminology (N)	Common General (N)	Common General (N)	Spelling (N)	Use/origin (N)	Legal requirements (N)	Legal requirements (N)	
TARGET	SOURCE	TARGET	SOURCE	TARGET	SOURCE	TARGET	
Misspellings (N)	Non-terminology (N)	Non-terminology (N)	Spelling (N)	Spelling (N)			
TARGET	SOURCE	TARGET	SOURCE	TARGET			
Origin (N)	Region (N)	Region (N)	Unusually (N)	Unusually (N)			
TARGET	SOURCE	TARGET	SOURCE	TARGET			
Unusually (N)							
TARGET							

DEMO: <http://www.translate5.net>
<http://scorecard2.gevterm.net>

MQM for large organizations

- Automatic MQM profiles
- Share MQM profiles
- Sampling methods and quality estimation
- Compare MT and human output directly
- Include MQM profile in RFPs

Looking for feedback:

[http://www.qt21.eu/
mqm-definition](http://www.qt21.eu/mqm-definition)

Questions?

Learn more at

<http://www.qt21.eu>