# Multidimensional Quality Metrics: A Flexible System for Assessing Translation Quality

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# PROBLEMS IN ASSESSING QUALITY

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95% of professionally translated content at one major

LSP is never evaluated for quality.

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"Translators are the garbage collectors of the documentation world" –Alison Toon, HP

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# “I know it when I see it”

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Machine Translation quality scores (BLEU, NIST, etc.) are totally different from human evaluation.

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MT methods require

reference translations:

Cannot be used for

production purposes

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# Change the reference translation(s) and the score changes

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# The problem with BLEU

No substantial improvement for human use

# The problem with BLEU

Substantial human improvement but no BLEU improvement

Human quality assessment

takes too much time

and is not principled

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Most sampling today
is random but

errors are not random

Wait a minute...

# What do you mean by quality?

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# 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

# Sounds simple, right?

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It's actually quite radical
and it drags translation
kicking and screaming
into the modern world of
quality management

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# Multidimensional Quality Metrics

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# Why not use a single metric everyone shares?

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OK.

Which one?

LISA QA Model
SAE J2450
SDL TMS
Acrocheck
ApSIC XBench
CheckMate
QA Distiller
XLIFF:Doc
EN15038...

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

*The only thing they agree on is terminology

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(Probably because there is

no single set of criteria

that applies to all kinds of

translation)

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# There is no one-size-fits-all metric

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MQM provides a catalog of issue types suitable for various tasks

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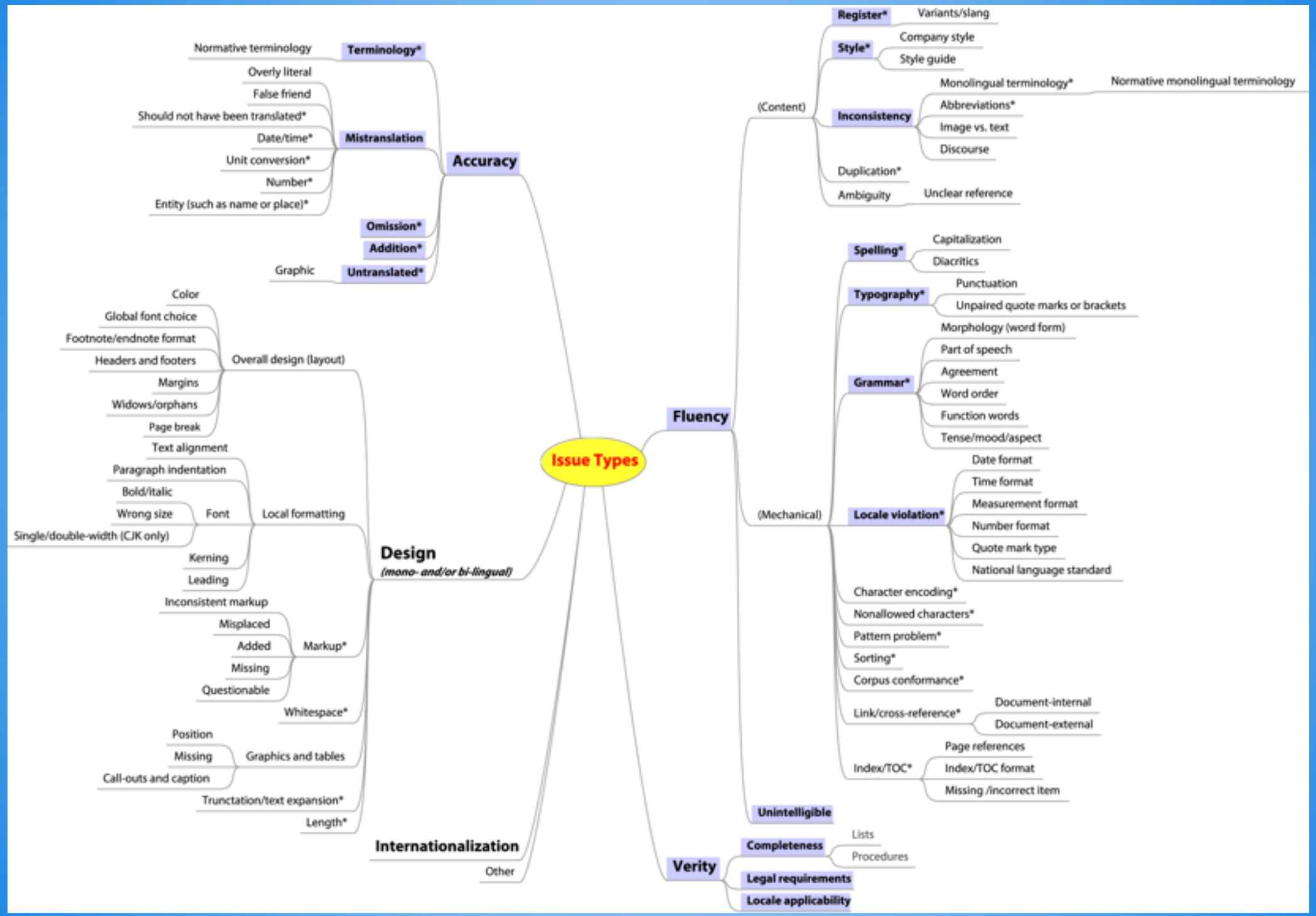
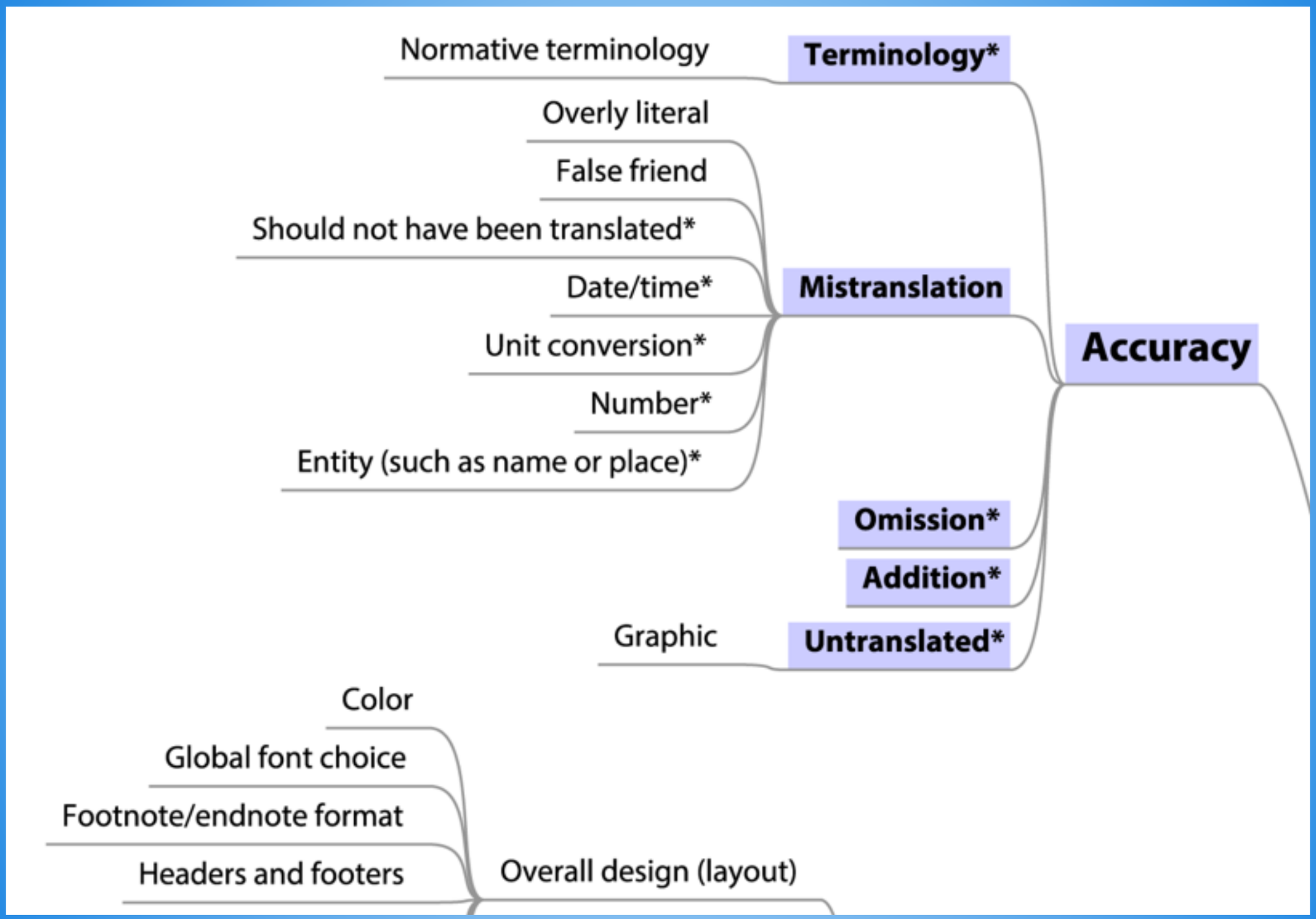



# The "full" MQM ("Spaghetti")




# Zooming into the "full" MQM

# Wait! Weren't we trying to improve things?

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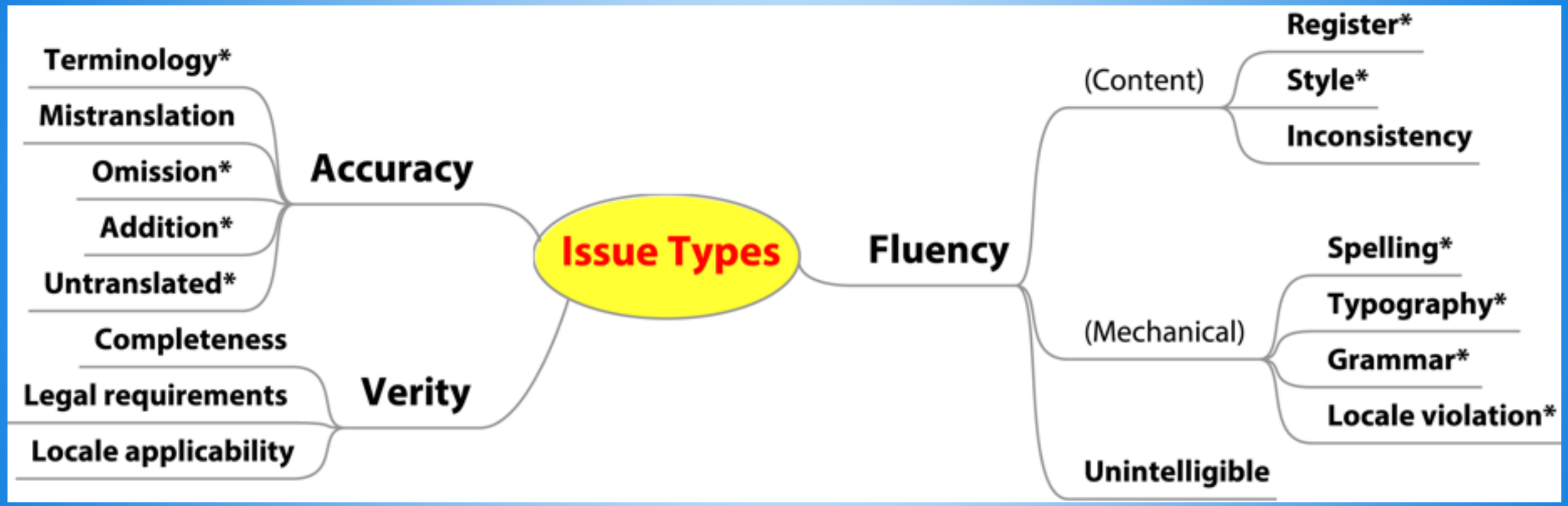
Issue Types
Accuracy
Terminology*
Mistranslation
Omission*
Addition*
Untranslated*
Completeness
Verity
Legal requirements
Locale applicability
Fluency
(Content)
Register*
Style*
Inconsistency
(Mechanical)
Spelling*
Typography*
Grammar*
Locale violation*
Unintelligible

# The MQM Core

Issues marked with a star (*)
can be automatically
detected

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# Accuracy and Fluency

# What's Verity?

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Verity provides a way to deal with the text in relation to the real world.

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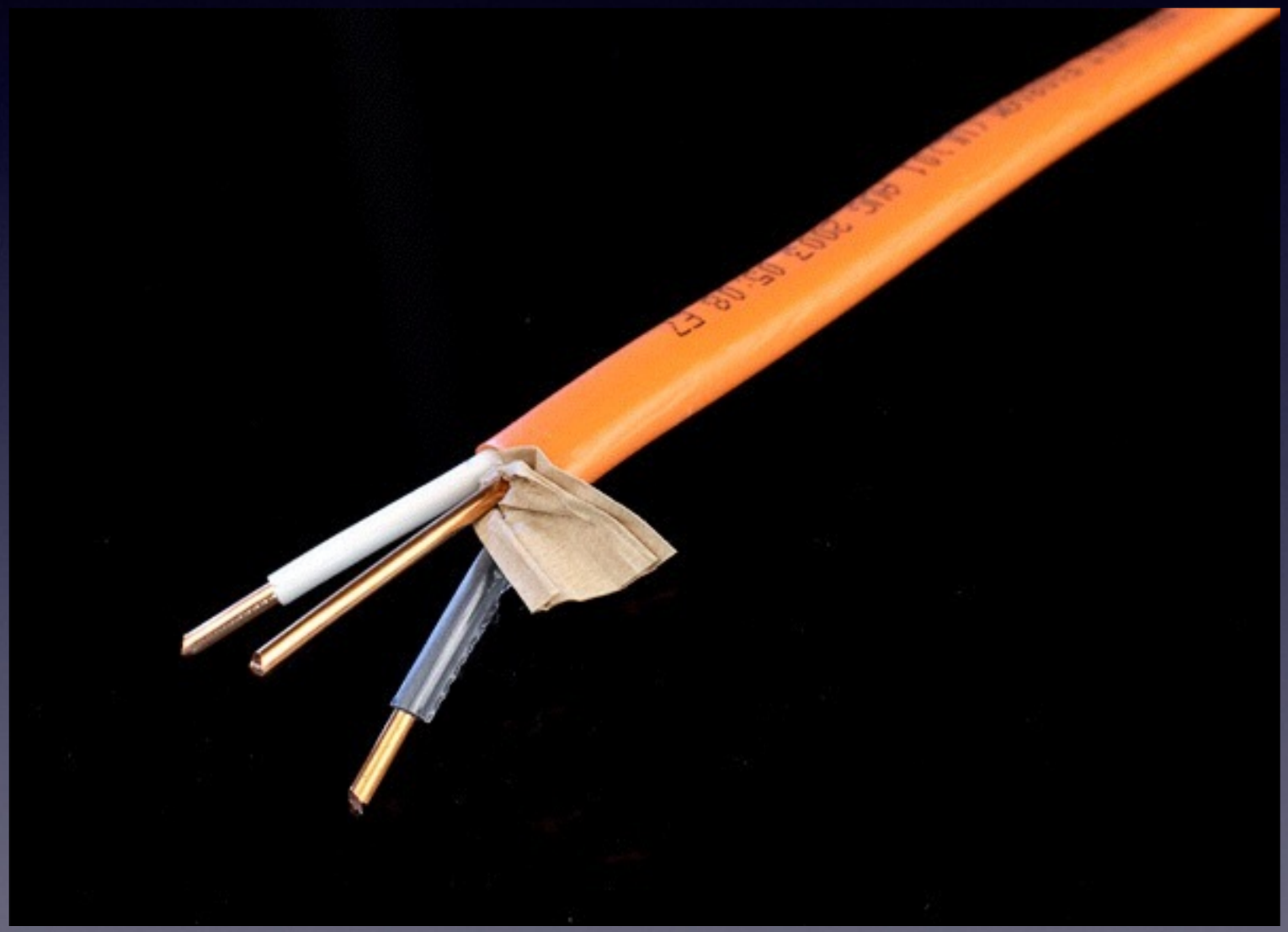
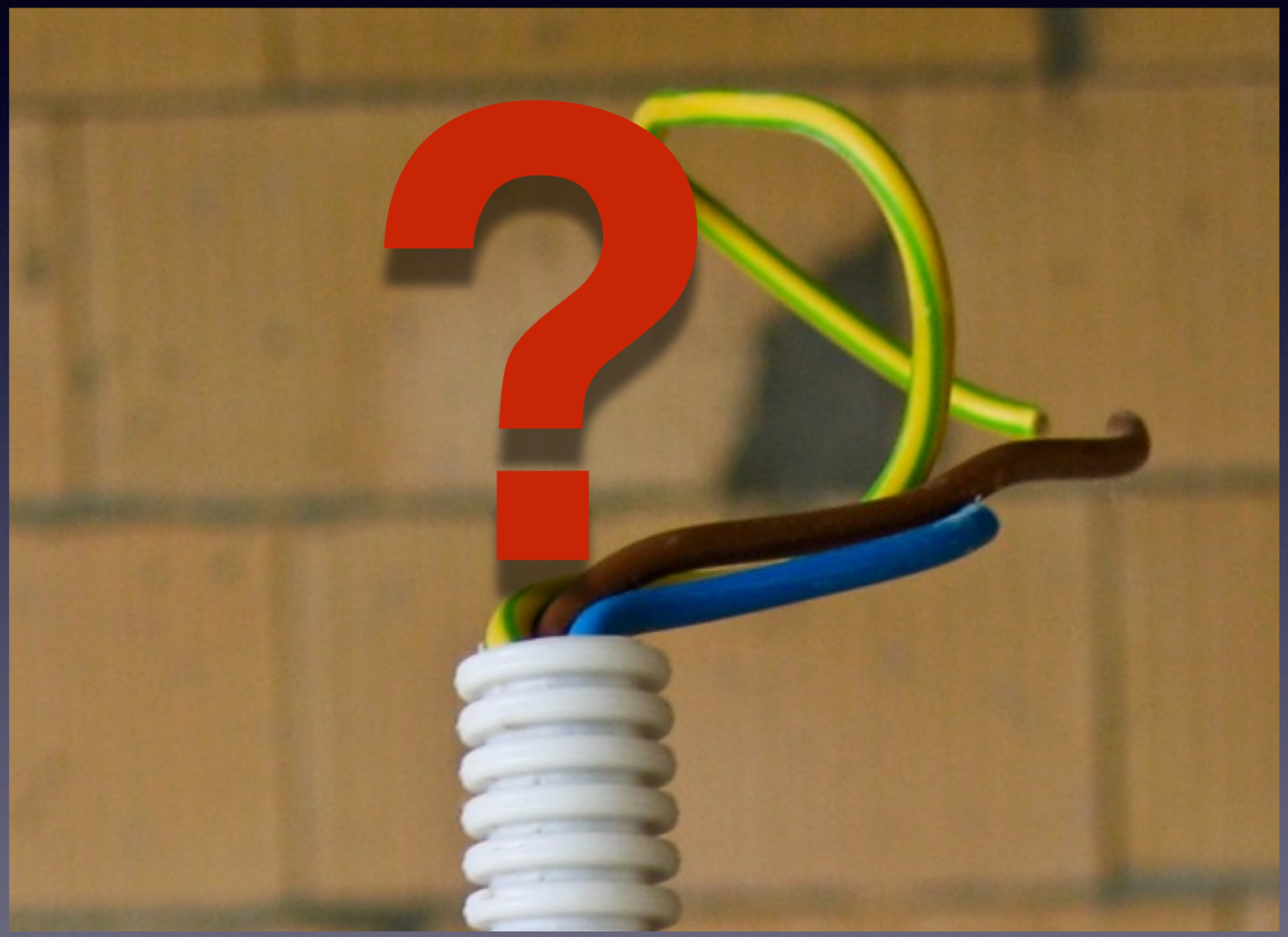
# Locate the ground wire (bare copper)...



# Finden Sie das Erdungskabel (blankes Kupfer)



# You don't use all of MQM (or its core):

# you use the parts you need.

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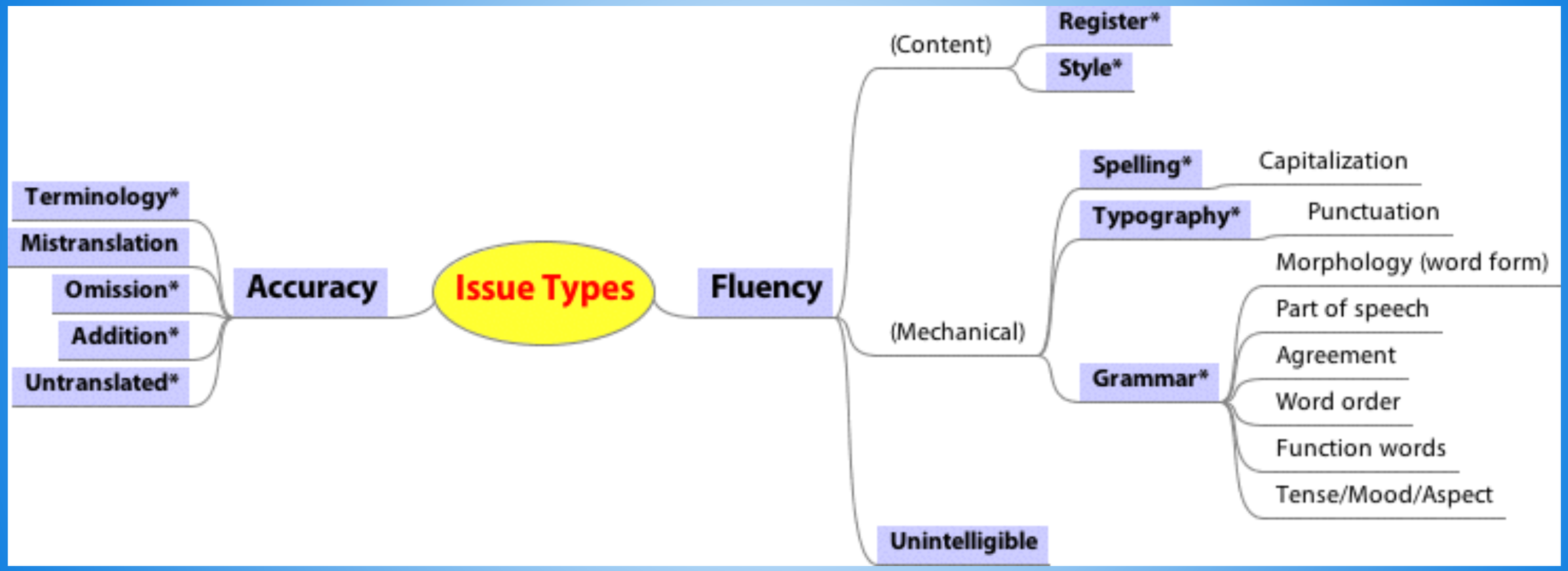
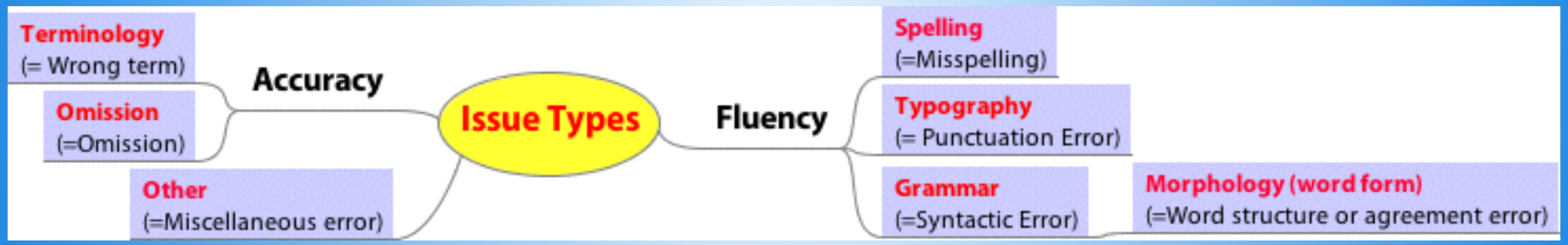



# MQM for MT Diagnostics


Issue Types
Accuracy
Terminology
(= Wrong term)
Omission
(=Omission)
Other
(=Miscellaneous error)
Fluency
Spelling
(=Misspelling)
Typography
(= Punctuation Error)
Grammar
(=Syntactic Error)
Morphology (word form)
(=Word structure or agreement error)

# SAE J2450

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

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Dimensions help you decide what to check (and also help you communicate with your LSP)

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No more assuming what the parties want or how to check it

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# 12 Dimensions

(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

# Open-source tools* to demonstrate MQM

*translate5 source code is published.
Other tools' code will be published in 2014

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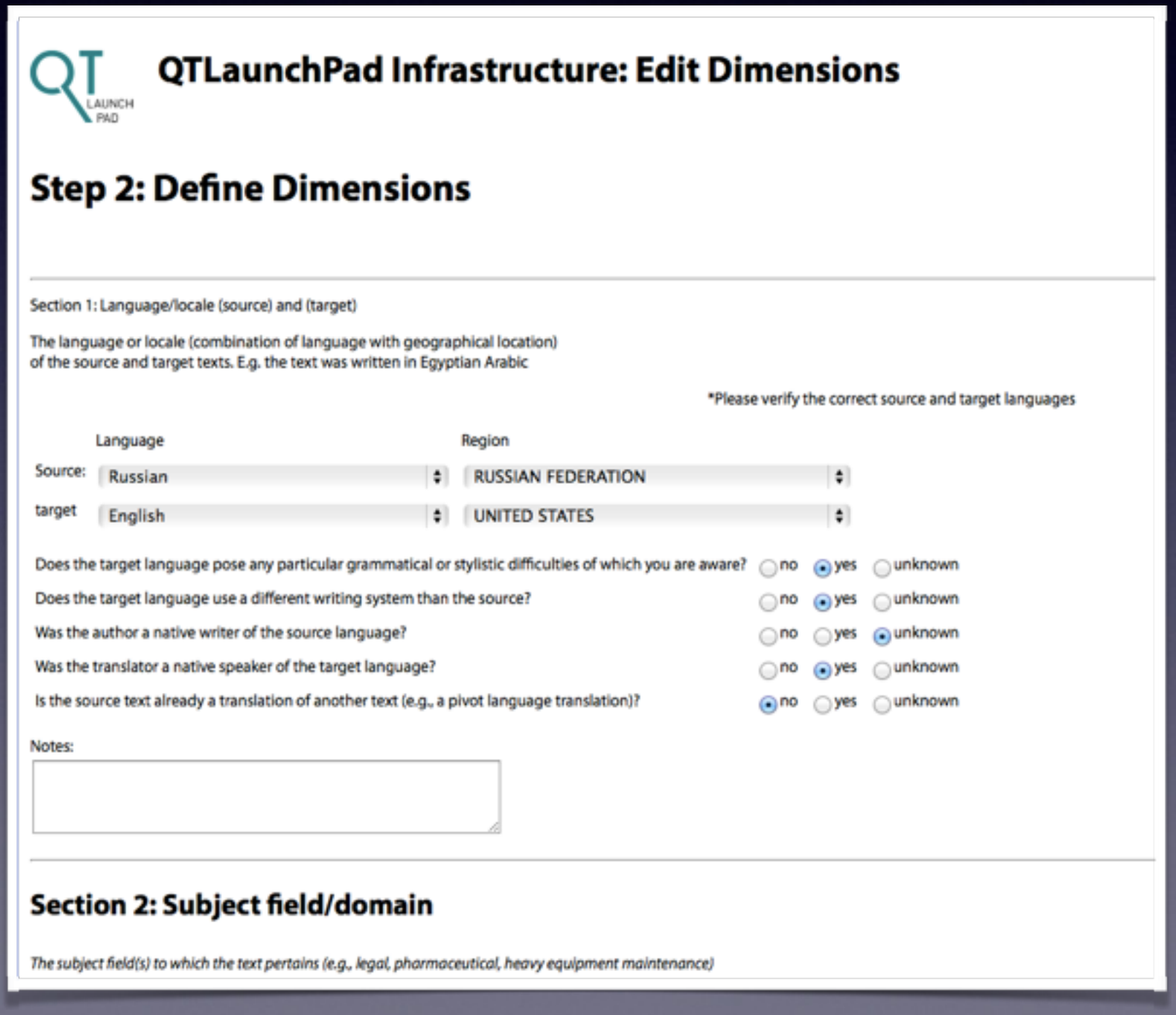
# An Online Tool for Building Dimensions and Metrics



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? | no | yes | unknown |
| Does the target language use a different writing system than the source? | no | yes | unknown |
| Was the author a native writer of the source language? | no | yes | unknown |
| Was the translator a native speaker of the target language? | no | yes | unknown |
| Is the source text already a translation of another text (e.g., a pivot language translation)? | no | yes | unknown |

Notes:

## Section 2: Subject field/domain

*The subject field(s) to which the text pertains (e.g., legal, pharmaceutical, heavy equipment maintenance)*

http://www.qt21.eu/MQM

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Subject Fields:

Is the subject field in a regulated industry where legal compliance is mandated? ○ no ◉ yes ○ unknown

Is the subject field a technical field where particular terminology is expected? ○ no ◉ yes ○ unknown

Notes:

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## Section 3: Terminology (source/target)

*Any special terminology that needs to be noted in the source or target texts*

Terminology (list or reference):

volga.tbx

Notes:

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## Section 4: Text type

*The type/genre of the content (e.g., novel, technical user manual, marketing)*

Text type:

service manual

Is the text type likely to require special attention to style or accuracy? ○ no ◉ yes ○ unknown

Will the text type have any other implications for other aspects of the translation? ◉ no ○ yes ○ unknown

Notes:

# Tabular Scorecard

Show Dimensions

**Score card**

The following score card automatically calculates scores based on the information entered.

| Information about the text | | Severity Multipliers | |
|---|---|---|---|
| Word Count (Source): | 200 | Minor: | 1 |
| Word Count (Target): | 300 | Major: | 5 |
| | | Critical: | 10 |

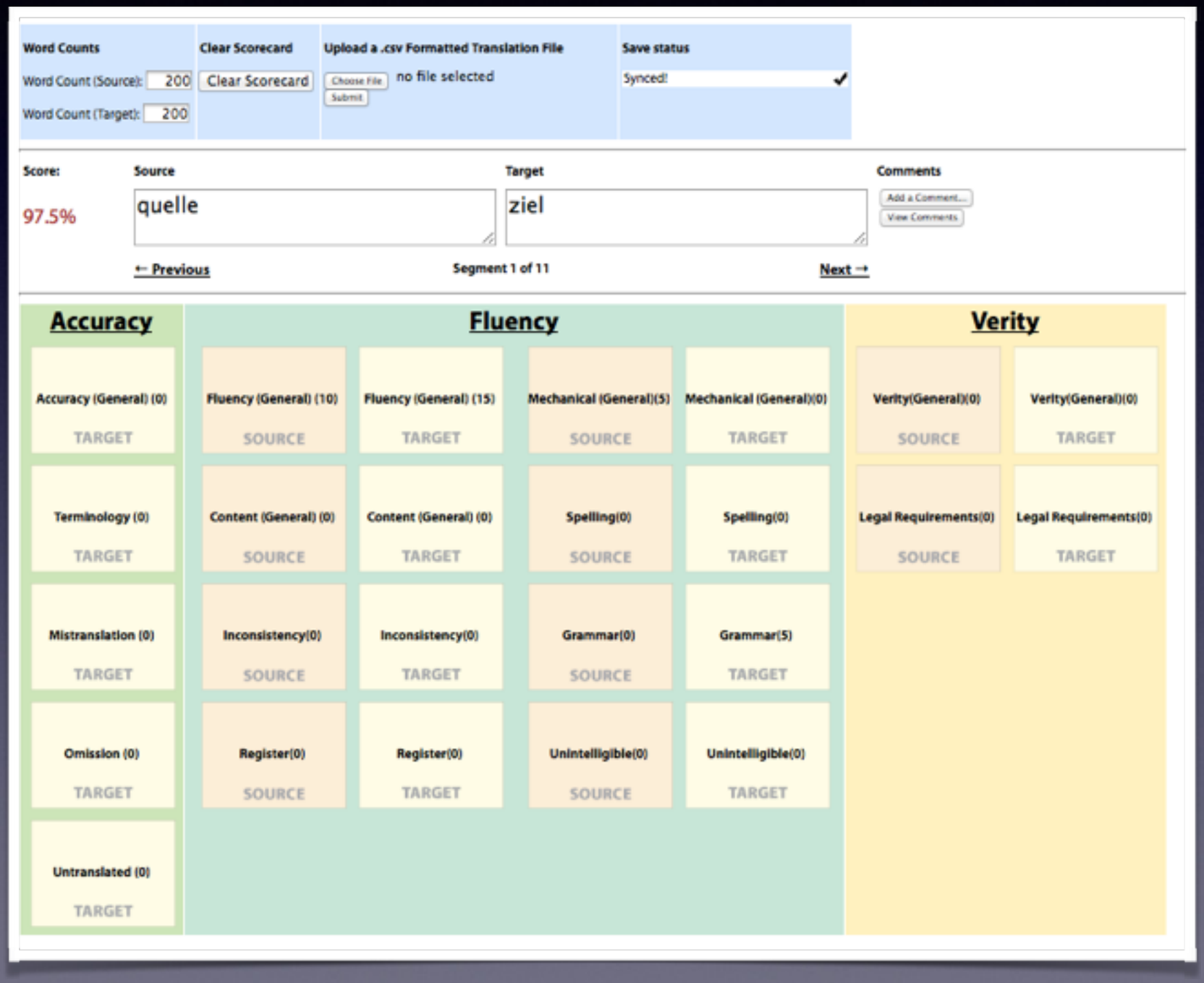
**95.7%**

| | | Target Text Issues | | | | | | Source Text Issues | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Issue counts | | | Penalties | | | Issue counts | | | Penalties | | |
| Issue Type | Weight (default=1) | Minor | Major | Critical | Raw | Adj. | Target Subscore | Minor | Major | Critical | Raw | Adj. | Source Subscore |
| **Accuracy** | | | | | | | | | | | | | |
| Terminology | 1.0 | 1 | | | 1 | 1 | 99.7% | | | | | | |
| Mistranslation | 1.0 | 1 | | | 1 | 1 | 99.7% | | | | | | |
| Omission | 1.0 | | | | 0 | 0 | 100% | | | | | | |
| Untranslated | 1.0 | | | | 0 | 0 | 100% | | | | | | |
| *Accuracy Subtotal* | | | | | — | 2 | 99.3% | | | | | | |
| **Fluency** | | | | | | | | | | | | | |
| Unintelligible | 1.0 | | | | 0 | 0 | 100% | 1 | | | 1 | 1 | 99.5% |
| **Content** | | | | | | | | | | | | | |
| Inconsistency | 1.0 | 4 | 2 | 0 | 14 | 14 | 95.3% | 1 | | | 1 | 1 | 99.5% |
| Register | 1.0 | | | | 0 | 0 | 100% | | | | 0 | 0 | 100% |
| **Mechanical** | | | | | | | | | | | | | |
| Spelling | 1.0 | | | | 0 | 0 | 100% | | | | 0 | 0 | 100% |
| Grammar | 1.0 | | | | 0 | 0 | 100% | | | | 0 | 0 | 100% |
| *Fluency Subtotal* | | | | | — | 14 | 95.3% | | | | — | 2 | 99% |
| **Verity** | | | | | | | | | | | | | |
| Legal requirements | 1.0 | | | | 0 | 0 | 100% | | | | 0 | 0 | 100% |
| *Verity Subtotal* | | | | | — | 0 | 100% | | | | — | 0 | 100% |
| **Total** | | | | | — | 16 | 94.7% | | | | — | 2 | 99% |

Save Metric

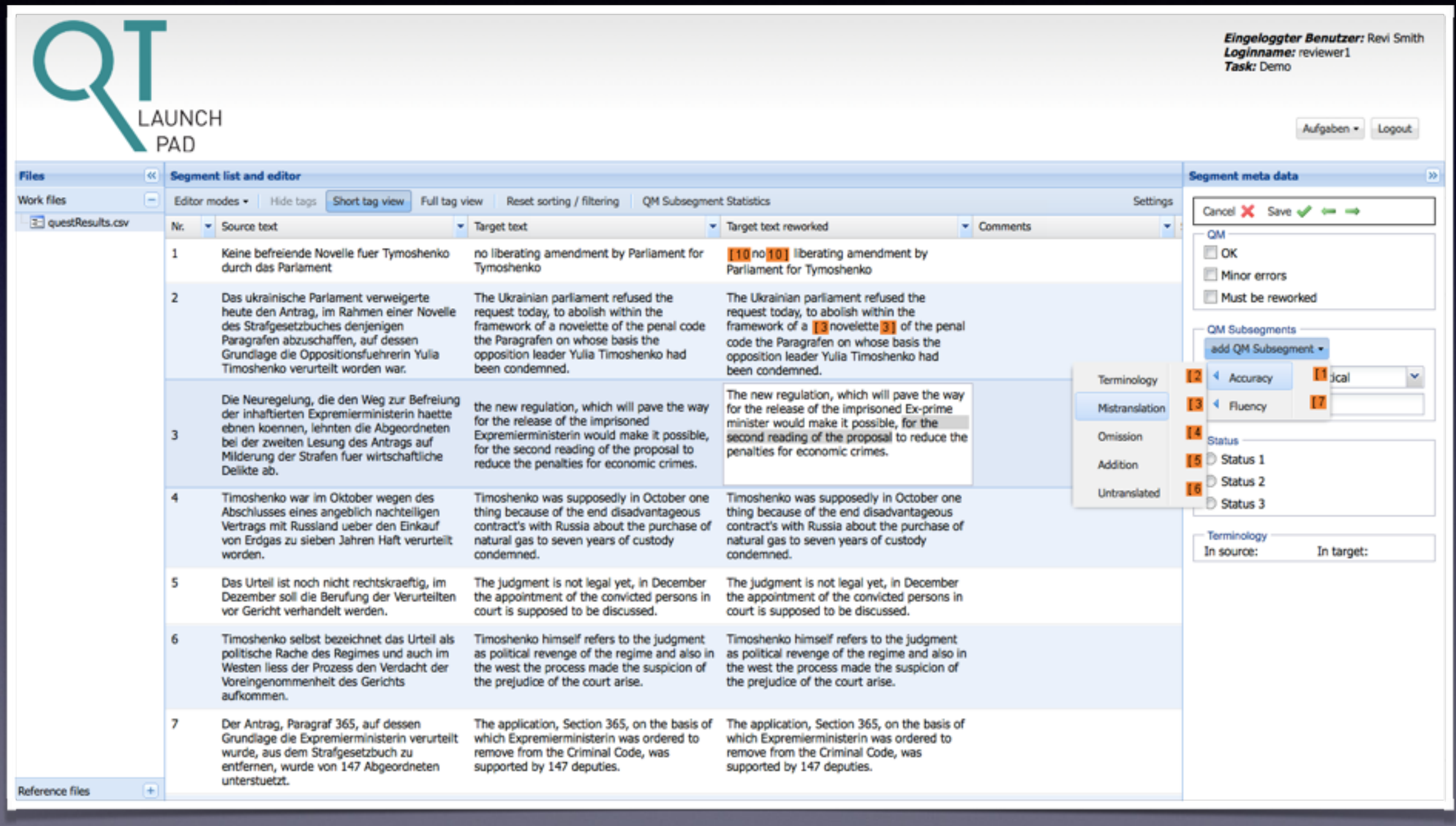
http://www.qt21.eu/MQM

# Ergonomic Scorecard




http://www.qt21.eu/MQM

# translate5




**DEMO: http://www.translate5.net**

# Currently clarifying the (complementary) relationship between MQM and the TAUS DQF Error Typology

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Learn more at

http://www.qt21.eu

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# Questions?

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