

# Translation by the aid of a web-based common application

- ❖ free working hours
- ❖ no need for office facilities
- ❖ access to the same information
- ❖ possibility of delimiting each participant's scope of action
- ❖ immediate and automatic updating of translation status for each term

**this is what the Danish application looks like:**

## Question for Ulrich:

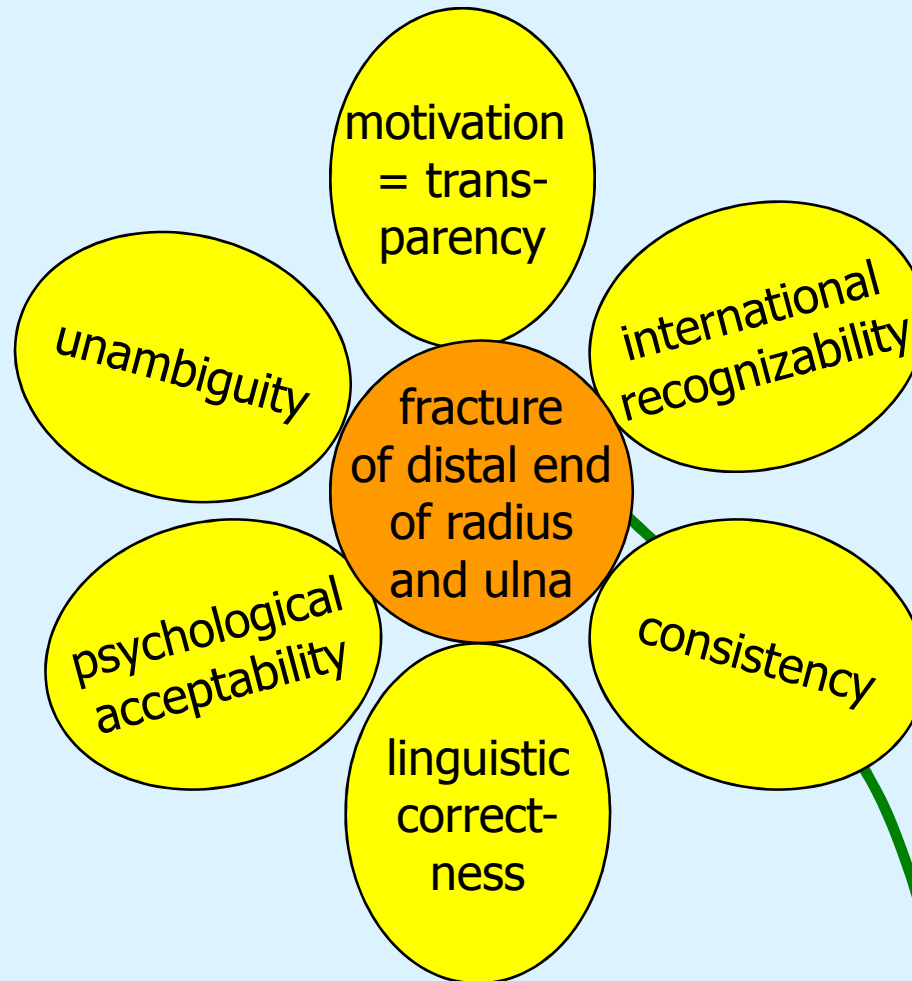
❖ Machine translation must be the ideal solution,  
since SNOMED CT is a "systematized terminology"?

# The TERM is the linguistic representation of the CONCEPT...

❖ ...therefore, a good term lives up to a number of specific

TERM REQUIREMENTS:

# The term in full bloom...



❖ **Motivation = transparency:** the term should reflect the concept/the meaning:

*open fracture of fourth cervical vertebra without spinal cord injury*

❖ **Unambiguity:** only one term should represent a concept and visa versa:

*physician* (ambiguous, cultural dependent); *hepatitis C* (unambiguous)

❖ **International recognizability:** as far as possible the term should be based on Latin/Greek:

*entire bursa of biceps femoris superior muscle (body structure)*  
(in latin: "bursa musculi bicipitis femoris superior")

*in red: term that does not live up to the requirement*

*in blue: term that does live up to the requirement*

❖ **Consistency:** similar construction for same type of term:

*abdominal compartment syndrome / compartment syndrome of thigh;  
sialadenitis / sialoadenitis*

❖ **Linguistic correctness:** spelling, grammar, syntactic rules should be complied with:

*gall bladder/gall-bladder; embro~~pathia~~pathia/embryopathia;  
bone graft to mandible/transplantation of bone graft to mandible*

❖ **Psychological acceptability:** clinical use sometimes has to prevail:

*Down's syndrome/trisomy 21-syndrome; Q-fever/infection due to Coxiella burnetii*

*in red: term that does not live up to the requirement  
in blue: term that does live up to the requirement*

## Exercise: What does it mean?

1. determination of acuity level (procedure)
2. refer to TOP counseling (procedure)
3. ins.rep.sick/accid/travel canc (procedure)
4. MOD F/MED/1 - NOS (procedure)
5. O/E - JVP (finding)
6. Renon-Delille syndrome (disorder)
7. procedure by intent (procedure)
8. fracture of phalanx of finger (disorder)

## Exercise: What is the difference/What is wrong?

1.1 part III accommodation (environment)

1.2 problem of visual accommodation (finding)

1.3 ocular accommodation (observable entity)

2.1 stress fracture (disorder)

2.2 fatigue fracture of vertebra (disorder)

3.1 removal of breast implant (procedure)

3.2 unilateral breast implant (procedure)

4.1 sprain of lateral ligament of ankle joint (disorder)

4.2 sprain finger, distal interphalangeal joint, radial collateral ligament (disorder)



## Refreshment time!



solutions will be served  
after the break....



## Solutions to exercise "What does it mean?"

**risk of misinterpretation of underlying concept if you do not consult the relationships table and/or compare with similar concepts**

1. The meaning of **acuity level** is strongly context dependent:

*"The person must have an visual acuity level of 20/70 or better when looking through both eyes..." (Google search: "acuity level" + "eyes")*

*"There has been a steady rise in the average acuity level (i.e., acuteness of need) of assisted living residents." (Google search: "acuity level" + "acuteness").*

2. **TOP** means *referral to counseling regarding termination of pregnancy* (TOP counseling is a synonym of "Counseling for termination of pregnancy")

## Solutions to exercise "What does it mean?"

abbreviations and acronyms may not be generally known and understandable

3. **ins.rep.sick/accid/travel canc** probably means *insurance report regarding illness, accident, or travel cancellation*
4. **MOD F/MED/1** is a Ministry of Defense assessment programme called F MED 1 ("used for entry, release and Naval Service Medical Board of Survey (NSMBOS) examinations"); NOS means *not otherwise specified*
5. **O/E** means *on examination*; **JVP** stands for *jugular venous pressure*.
6. **Renon-Delille syndrome** designates an *acromegaly AND thyroid-ovarian deficiency*

## Solutions to exercise "What does it mean?"

the understanding of certain concepts  
demands insight in the system of SNOMED CT

7. **by intent** means that the subordinate concepts contained in the subhierarchy are named and classified according to the purpose (the intent) of the procedures; it could for example be palliative or diagnostic. This principle is also applied in a number of other cases, like for example procedure by method, procedure by site, etc.
8. in SNOMED CT, **finger** acutally mean "another finger than the thumb"! A co-ordinate concept of this concept is *fracture of phalanx of thumb*.

# Solutions to exercise "What is the difference/what is wrong?"

**identical words may point to different concepts  
and identical concepts may be represented by different terms**

- 1.1: **part II accomodation** is a Cultural-specific concept from the U.K.: housing in a certain type of social accommodation;
- 1.2 and 1.3.: **accomodation** = "adjustment, especially of the eye for seeing objects at various distances" ([www.thefreedictionary.com](http://www.thefreedictionary.com)). Also, since **ocular accomodation** is the preferred term representing the Observable entity, the expression of the finding should also refer to *ocular accomodation* instead of **visual accomodation**.
- 2.1 & 2.2: since **fatigue fracture** is just a synonym and **stress fracture** is the preferred term for this disorder, **stress fracture** should be the first choice expression in connection with other terms.

## Solutions to exercise "What is the difference/what is wrong?"

**shortened words in terms may mask the semantic content**

3.1: here **implant** is OK; it represents the physical object (the breast prosthesis)

3.2: here **implant** should be *implantation* (the procedure)

## Solutions to exercise "What is the difference?", ex. 4

**lack of syntactical consistency is confusing**

4.1: OK - a syntactically well constructed and easily understandable term

4.2.: this is actually not a term, but a telegramme-like listing of the semantic elements of the concept. The term should have been constructed the same way as 4.1: *sprain of radial collateral ligament of distal interphalangeal joint of finger*

## Ill-defined basic SNOMED CT concepts present a problem!

poisoning by drug AND/OR medicinal substance (disorder)  
poisoning by medicaments NOS (disorder)  
poisoning by antithyroid agent (disorder)  
drug or medicament (substance)

❖ What is the difference between *drug*, *medicinal substance*, *medicament*, and *agent*?

# Linguistic Guidelines for Translation of SNOMED CT

- ❖ a series of rules and recommendations regarding the translation process and important issues to be considered in this context
- ❖ meant as an instructive, normative and supporting document for all those involved in the translation process
- ❖ elaborated by the IHTSDO Translation Working Group (WG)
- ❖ WG discussions of content at the Copenhagen IHTSDO meeting in October 2007
- ❖ first draft of 20th February 2008
- ❖ final version of first edition to be ready for autumn 2008



# Content of Linguistic Guidelines for Translation of SNOMED CT

- ❖ An introduction to terminological principles
- ❖ A description of the structure of SNOMED CT
- ❖ A set of rules and recommendations regarding the translation:
  - ❖ Basic approach
  - ❖ General linguistic issues
  - ❖ Specific linguistic problems
- ❖ Recommendations regarding valid sources of information
- ❖ Recommendations regarding the translation process/workflow