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Benefits

- Unambiguous definitions, comparability
- Clear estimation of capabilities and requirements
- Limits inherited from information nature
 - Modeling Reality is not upon reach?
 - Subjectivity New York Times or Rohrschach inkblot?
- Limits relating to cognition context
 - Success experienced in some huge cognition domains
 - To what extent can this be generalized? If yes how?
- Additional benefits new directions
 - Metrics show that infinitesimal knowledge may be OK
 - Modeling requires goal setting: Reverse causal direction!

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Principle 2 – Information is essentially subjective

- The occurrence probability is estimated by receiver
- Examples : heads & tail; heads & heads

$$Q = \log_2\left(\frac{1}{p}\right)$$
 [bit]

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7. Conclusion

- Robocup could help develop SCPR, but there is also a wide spectrum of other ways to do that
- Robocup: Rob+AI; "at-Home" league: +Human-Machine interaction
- Quantitative cognitics: key field in this context.
- Theory published, now complemented with revisit of supporting notions:
 - Information is model-based, very perishable, and highly subjective;
 - Modeling is a necessity between cognition and reality; models are, but infinitesimal exceptions, totally incomplete. Yet they may be useful for some specific goals.

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More information...

"La Cognitique- Définitions et métrique pour les sciences cognitives et la cognition automatisée", Jean-Daniel Dessimoz, ISBN 978-2-9700629-0-5, Aug. 2008, <u>http://cognitique.populus.ch</u>. (Translation in English is in preparation)

List of other publications, especially in English: browse from www.cognitics.com

> Jean-Daniel Dessimoz, HESSO.HEIG-VD, Int. Conf. SIMPAR-SCPR 2008, 3 Nov.2008



