

openLCA – implications of an emerging open source software

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GreenDelta^{TC}
SOUND LIFE CYCLE ANALYSIS

openLCA - implications
Ciroth, Srocka, Hildenbrand, Sept. 11, 2008

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Outline

1. Idea for an open source sustainability assessment software
2. Status: Project, technique, user interaction
3. A contributing community?
4. Case studies
5. Outlook

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1. Idea for an open source sustainability assessment software

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Two Key ideas:

- 1 Create
open source,
freely available,
flexible,
high performance
software for sustainability assessment
(environment; cost; social aspects)
- 2 Build a community of users and contributors

Benefits

- 1 Access to other open source software → flexibility & fast progress
- 2 No hassle with software licence sales, and licence control → lots of new applications and use schemes
- 3 Flexibility in software creation and application (in fact, strict distinction between software user and software developer disappears)

Sustainability

(three aspects: Environmental, economic, social)

Initial focus:

Life Cycle Assessment, of products, over their entire life cycle (resource extraction, production, use, disposal)

As laid down in ISO 14040/14044 standards

2. Status

Status: Selected techniques

- IT: Eclipse/Java
(→ Rich Client Application, modular and flexible),
MySQL database

- Collaboration website, server, repository:
www.openlca.org

- Additional Sourceforge site for file releases



Status: Project schedule

Start: Autumn 2006,
foreseen end: 2008

Format converter: summer 2007, revision autumn 2007

Life Cycle Assessment application:
released Sept. 10, 2008,
to Funding Consortium (!)

Uncertainty module asf.: Winter 2008

Status: Recognition and Organisation

Core project team: GreenDeltaTC

Funding Consortium (PRé, PE Int.)

External advisors (US, D)

External testers (around 40 institutes worldwide,
D, US, Fiji, Italy, Mexico...)

External support (UNEP, FZK, TGS)

Newsletter: 250 addresses

3. A contributing community?

External Contributions

Sylvatica (US, Maine): Implement conjointly an interface of openLCA to Earthster, an open source tool for optimising supply chains re sustainability,

Sponsored by TheGreenStandard.

External Contributions

Not more since

- people that care about the environment AND know how to program are scarce (!)
- no public release yet

4. Case studies

Current case studies

- **welding shop**, example used in VDI 4090 working group
- **board game**, French company (small), producing environmentally friendly games
- **renewable energy datasets** (+probably more), currently validated and implemented for German EPA,
- **Environmental Product Declarations in furniture industry**, US, proj. by TGS
- **photovoltaic cells**, as modelled by ECN Netherland

Photovoltaic cells, ECN

..to be demonstrated live..

5. Outlook

Outlook

- **very soon:** Public release (!)
if you are interested: send a an email or talk to us
- uncertainty module, parameters, other refinements: Until winter 2008
- hopefully broad application and a variety of uses
- addition of dynamic modelling, forecasting, Life Cycle Costs, Social Aspects: Part of EU Collaborative project (!), 2008 - 2012

Outlook

Public release of the LCA application will definitely be a large step. We look forward to the feedback this will generate.

Obviously, if you have questions re

- Funding consortium,
- specific applications,
- contributions

Then please do contact us.

Vielen Dank!

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