



Lightwork: Managing marking effectively

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Introduction

Lightwork is a new application for the management and marking of assignments. In addition to making the process of working with assignments more efficient, *Lightwork* aims at encouraging good marking practices. *Lightwork* is designed to work in conjunction with *Moodle*. It builds on the assignment functionality *Moodle* offers and adds features that help with the marking tasks.

The *Lightwork* project is funded by the New Zealand Tertiary Education Commission. The project team contains members from Massey University, the University of Waikato, Te Whare Wānanga o Awanuiārangī, The Open Polytechnic, and the University of Canterbury. The team contains academics, e-learning specialists, educational developers and professional software developers. The outcomes of the project are targeted at the wider tertiary sector and include, besides the development of the application, the establishment of a user community.

Lightwork features

The requirements for *Lightwork* have been prioritised. The first release contains the following features:

- Downloading of course, students and assignment data from *Moodle*;
- Definition of marking rubric by teacher;
- Allocation of marking to multiple markers;
- Creation of marking sheets based on marking rubric for each student assignment;
- Dealing with any type of student work and viewing this work in associated applications;
- Entering of feedback and marks linked into marking sheets by markers;
- Writing and applying of frequently used comments, associated with marking rubric, by marking team;
- Support for teacher in monitoring work of markers;
- Presentation of marking feedback to students linked to marking rubric;
- Automated upload of marks, marking feedback and annotated student work to *Moodle*;
- Automated refreshment of data from *Moodle*;
- Options of working online or offline.

A wide range of advanced features have been identified for implementation in future releases. Among these features are support for the marking of assignments submitted by groups of students and the annotation of student work presented PDF format based on the marking rubric.

Lightwork's relationship to Moodle

Lightwork is an application that runs on the teacher's PC. It connects to the institution's *Moodle* installation and works together with the assignment module and Gradebook in *Moodle*. The students still submit their assignment work to *Moodle* and receive their marks and feedback via *Moodle*. The students do not interact with *Lightwork* directly. After having setup the assignment specification in *Moodle*, the teacher works in *Lightwork* to manage the marking and to perform the marking tasks.

Like *Moodle*, *Lightwork* is open source software that can be freely downloaded and installed. *Lightwork* is compatible with *Moodle* 1.9.5. The decision to target this *Moodle* version was made to allow the use of *Lightwork* with current *Moodle* installations. The *Lightwork* development team is aware of the upcoming changes in *Moodle* 2.0 and has integrated an upgrade path into the *Lightwork* design.

Technical details

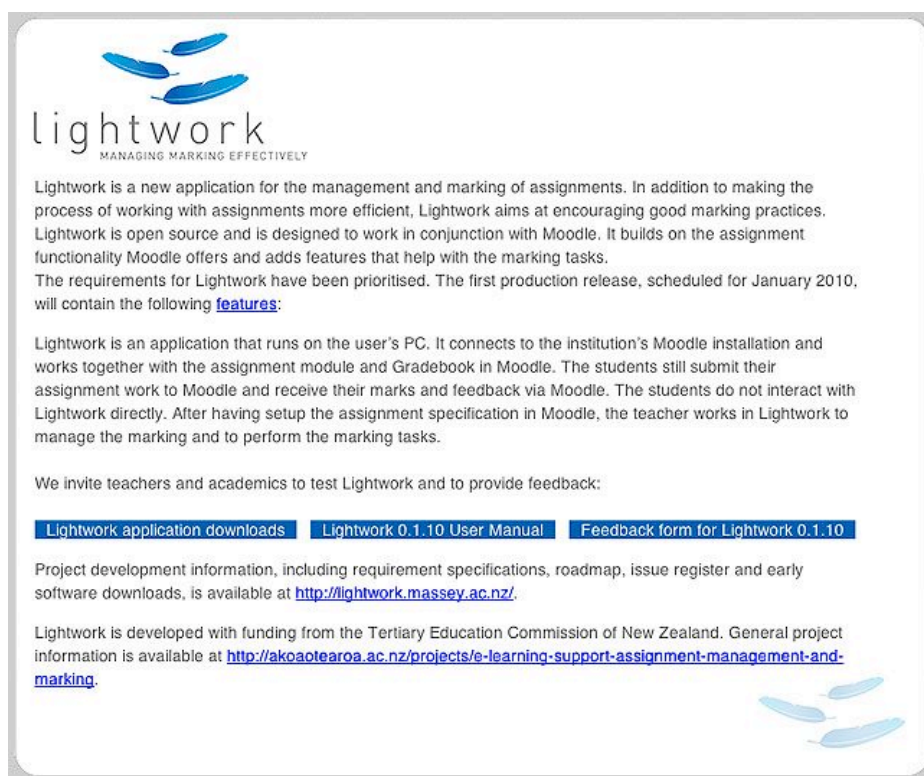
Lightwork is developed as a rich client Java application within the Eclipse rich client framework. It uses SOAP web services to interact with *Moodle*.

The background to *Lightwork*

The specification of the features required for supporting the management and marking of assignments in pedagogically sound and efficient ways goes back to an earlier research project (<http://etools.massey.ac.nz>). This project undertook a larger literature and e-learning tool review and interviewed 90 teachers across the New Zealand tertiary education sector. Additionally, the know-how of the team members of the current project and the experiences with earlier applications (<http://www-ist.massey.ac.nz/marktool/>) have flowed into the *Lightwork* specifications.

More information and application download

The *Lightwork* home page (<http://lightworkmarking.org/>) contains links to a general project description and to the software development site, which houses the requirement specifications, the open source code and application downloads. Members of the tertiary community are invited to explore *Lightwork* and to provide feedback.



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MANAGING MARKING EFFECTIVELY

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The requirements for Lightwork have been prioritised. The first production release, scheduled for January 2010, will contain the following [features](#):

Lightwork is an application that runs on the user's PC. It connects to the institution's Moodle installation and works together with the assignment module and Gradebook in Moodle. The students still submit their assignment work to Moodle and receive their marks and feedback via Moodle. The students do not interact with Lightwork directly. After having setup the assignment specification in Moodle, the teacher works in Lightwork to manage the marking and to perform the marking tasks.

We invite teachers and academics to test Lightwork and to provide feedback:

[Lightwork application downloads](#) [Lightwork 0.1.10 User Manual](#) [Feedback form for Lightwork 0.1.10](#)

Project development information, including requirement specifications, roadmap, issue register and early software downloads, is available at <http://lightwork.massey.ac.nz/>.

Lightwork is developed with funding from the Tertiary Education Commission of New Zealand. General project information is available at <http://akoatearoa.ac.nz/projects/e-learning-support-assignment-management-and-marking>.

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Please cite as: Heinrich, E (2009). *Lightwork: Managing marking effectively*. In *Same places, different spaces. Proceedings ascilite Auckland 2009*.
<https://doi.org/10.14742/apubs.2009.2338>

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