Web Technologies résumé:
PHP-driven Drupal CMS web sites

Dr Darren R. C. KELLY

Webel IT Australia consultancy (established 2000)

Version date: 01 Aug 2016

The focus of this résumé is on the use of the PHP-driven **Drupal** Content Management System (CMS) for client web sites and as a support technology for other Webel IT Australia activities including IT training and education, project tracking, software development support, and for promoting research and development:

- The latest version of this résumé is available online at: `https://www.webel.com.au/resume/web`
- A database-driven table of IT skills is available at: `https://www.webel.com.au/view/technologies`
- A full-career *Curriculum Vitae* is available as an online database at: `https://www.webel.com.au/cv`
- Professional references will be made available on request only.

Table of Contents

Web Technologies résumé**:** Dr Darren R C Kelly

Post: Webel IT Australia, PO Box 1816, Bondi Junction, NSW 1355, Australia   **Tel:** +61 (2) 9386 0090   **Mobile:** 0405 029 008

1) Personal details and contact information

Full name:	Dr Darren Raoul Charles KELLY, BSc, PhD
Birthplace:	Sydney, Australia
Nationality:	Australian
Languages:	English and German
Business name:	Webel IT Australia (trading as WEBEL.COM.AU)
Australian Business Number (ABN):	67 677 268 579
Business postal address:	PO Box 1816, Bondi Junction, NSW 1355, Australia
Residential address:	*(Available on request)*
Telephone:	+61 (2) 9386 0090
Mobile/Cell:	0405 029 008
Email:	Please visit[1]: https://www.webel.com.au/contact
Web:	https://www.webel.com.au
LinkedIn:	https://www.linkedin.com/in/drdarrenkelly

---

1   For spam prevention direct email is only provided after the initial contact because this document is also made available online.

2) Overview of career related to web and internet technologies

My name is Dr Darren Kelly, I work primarily as an IT consultant, software architect and web engineer via my business Webel IT Australia, specialising in development of PHP-driven Drupal *Content Management System (CMS)* web sites and Enterprise Java web applications for clients in industry, science, and education.

History: I originally trained in computational physics and mathematics, and I worked for a decade as a scientific computing expert. I have worked for some of the world's best-known science organisations.

I have programmed computers since I was a young teenager. I have used many low-level historical coding languages and I command many object-oriented languages, primarily PHP, Java, C++, and XML Schema.

I first used the internet as a university student and civilian research scientist in the late 1980s. In the 1990s I worked in Hamburg, Germany at the DESY particle accelerator institute – a sibling institute of CERN, the "home" of the World Wide Web – where I was also exposed to early web browser technology.

On returning to Sydney, Australia in late 1998, I decided to specialise in object-oriented programming for database-driven web sites and web applications and to promote emerging software engineering technologies through IT Training courses and online IT education. In 2000, I established the consultancy business **Webel IT Australia** - the *'Elements of the Web'* - and honed my skills in dynamic web serving by developing the (now obsolete) Webel library - initially in object-oriented Perl then later using Java's former JavaServer Pages web technology with XML and XSL transformations. The library was used for Webel IT's own sites and for DotCom start-up clients, who engaged me as an IT consultant and web developer. I also worked for an Internet Service Provider (ISP) gaining experience with networks and commercial web usage.

Thereafter, my web development and software engineering strategy was increasingly aligned to leverage World Wide Web Consortium (W3C) and Object Management Group (OMG) standards, enterprise-level web application frameworks, and popular CMS web site technologies with large developer communities.

I have extensive hands-on experience with and fully command many major modern web technologies and software engineering languages such as object-oriented PHP, Java, Java EE, JSF, JPA, SQL, MySQL, XML, XML Schema, XSLT, XHTML/HTML5, DHTML, JavaScript, jQuery, CSS, SASS, AJAX, JSON, and database entity mapping technologies. (Please visit also the technology matrix appendix.). I have employed these technologies for development of desktop applications, browser-based web applications, intranet and middleware components, and for instrument modelling and control - for organisations such as the University of Sydney, Macquarie University, the Australian Nuclear Science and Technology Organisation (ANSTO), No Magic Inc. (developers of the popular MagicDraw UML software engineering tool), IT training organisation Project Performance International (PPI), Australian venture startup GreenSoft, and for Australian government agencies such as the National eHealth Transition Authority (NEHTA).

I first worked with the PHP-driven **Drupal CMS** in 2006 as founder and author of the MagicDraw UML eSchool site during my time as consultant to No Magic Inc. In 2008, I redeveloped the Webel IT Australia sites to use Drupal CMS technology, drawing on educational examples from my own software engineering and R & D projects to demonstrate Drupal's capabilities, including: custom types; custom theming and PHP templates; custom query views; composite layouts; and serving of image, audio, and video media.

Since 2008 I have offered PHP-driven Drupal CMS web sites via Webel IT Australia as a specialist service. I developed numerous Drupal CMS web sites for commercial and government clients, digital media agencies, and for Webel IT Australia's own online IT education and business ventures. I continually assess and employ the most popular and useful contributed Drupal CMS modules on a demanding range of Drupal sites, and I develop custom Drupal modules. I have also performed large-scale migrations from legacy database-driven systems into Drupal CMS sites using custom object-oriented PHP scripting against the core Drupal APIs.

I have experience with most major Software Development Lifecycles and methodologies, and I have used Drupal CMS and JIRA issue tracking to help track software development projects and teams. I have also supervised Agile software development teams and have lectured on software engineering best practices.

3) Drupal CMS services, client sites, and demonstration sites

I have developed, populated, and managed dozens of Drupal CMS web sites – for direct clients of Webel IT Australia, for clients of digital media agencies, and for Webel business ventures - each illustrating particular aspects of Drupal CMS core and its many contributed modules, as well as my own custom Drupal modules.

Webel IT uses Git repository management in combination with multi-stage development for Drupal CMS. Most Webel IT sites and client sites are operated from secure Dedicated Servers or Virtual Private Servers, and I have worked on sites deployed on Amazon Web Services (AWS) and the Acquia Drupal server system.

Some Drupal CMS web sites I have worked on are described here in roughly reverse chronological order. For an overview of Webel IT's Drupal CMS services and a slideshow of some client sites please visit also:
https://www.webel.com.au/service/drupal

A remark on styling/theming, and use of JavaScript and browser interface UI/UX technologies

Most Drupal CMS web sites developed for clients of Webel IT Australia use quite simple styling with maximum emphasis on convenient and rapid access to large amounts of structured data and content via filtered database query reports and keyword searches. There is in fact subtle use of custom Drupal theming and advanced theme override techniques behind the scenes, as well as advanced CSS styling used to achieve these clean, straightforward styles. While I can also develop graphically "pretty" sites, this data-and-content-rich strategy has appealed well to the relatively serious industry, engineering, and education clients who have been the traditional targets of the Webel IT consultancy. As an architectural practice, where possible I prefer optimal isolation of business logic in server-side PHP to "client-side" front-end coding using JavaScript libraries, although I do command rich web browser UI/UX technology.

I also develop responsive web sites for viewing across a range of mobile devices, tablets and computers.

---

https://drupal8info.webel.com.au

Apr 2016 – *(ongoing)*: Webel IT Australia: An educational technology-assessment site for other Drupal developers, currently limited primarily to assessing the readiness for production use of the main core modules of the latest Drupal8 CMS version, and demos and reviews of the migration status of the most popular and useful contributed modules. *(Compare also with the extensive Drupal7 assessment site below.)*

This site demonstrates the use of the new Twig templating system from Symfony in Drupal8, and leverages the new YAML-based configuration propagation for Drupal8 in a multi-stage development environment. The site already contains many useful references on newer Drupal8 vs. older Drupal7 techniques. Unique graphical Unified Modeling Language (UML) analysis models and diagrams of the Drupal8 architecture and APIs are also demonstrated on the site. This technology-assessment site is under continual development.

The current conclusion is that Drupal8 is **not ready for production use <u>on very complex web sites</u>** and the state of migration of essential contributed modules required for rich sites is so far relatively limited. While I can develop Drupal8 web sites, I don't - unlike some web agencies - exaggerate its suitability.

Clients who wish to engage Webel IT for development of advanced Drupal8 sites should discuss their requirements realistically and understand that use of Drupal8 <u>currently comes with early-adoption risks</u>.

The more established Drupal7 version - with better contributed-module support - may still be advisable.

Jun 2015 – Aug 2015, Oct 2015 – Feb 2016, May 2016 – Jun 2016: Under contract via Webel IT Australia to the National eHealth Transition Authority (NEHTA) IT agency for the Australian government:

https://nehta.webel.com.au   *(Private client site, login access by request only, subject to approval)*

Developed a custom IT Training course on the Object Constraint Language (OCL) and the Unified Modeling Language (UML) of the Object Management Group (OMG) for use with the Model Driven Health Tools

(MDHT) suite for the National eHealth Transition Authority (NEHTA) of Australia.

A custom Drupal CMS content management system web site was installed and configured for collation and presentation of IT Training materials and for use by training participants in IT Training Workshops, as well as for issue tracking of the Model Driven Health Tools (MDHT) project, and for cross-referenced resources.

The same Drupal installation was later also used during another contract for collation of analysis results and issue tracking during an investigation into the use of OCL and UML within MDHT projects for NEHTA.

Likewise, the same Drupal site was used during another contract for tracking resources, references, and analysis results during investigation of the use of semantic web technologies in the HL7 Fast Healthcare Interoperability Resources (FHIR) project and to collate and classify ontology modelling best practices and policies from authoritative sources. Drupal Views were used to generate tables for inclusion in final reports.

Jan 2015 – Mar 2015: Under contract via Webel IT Australia to digital media agency Sitback Solutions:

http://www.moneymanagement.com.au

Developed an email Newsletter campaign composition system for collating live publication streams in Drupal for distribution via the Marketo email campaign management system. Used custom object-oriented PHP coding combined with Features-based Drupal module development and contributed modules such as: Views, Views Bulk Operations, Nodequeue and the Smartqueue API, Draggable Views, and Embed Views.

https://www.bodytrim.com.au

Feature development and maintenance for an e-commerce product and member-subscription Drupal7 CMS web site. Included working with responsive theming, Commerce, Rules, the eWay Payment Gateway API, and the ExactTarget CRM/MAS (Customer Relationship Management and Marketing Analysis System).

Apr 2014 – Jun 2014: Under contract to web agency Technocrat working on existing PHP-driven Drupal7 CMS sites for their Australian government client Health Direct:

http://www.mindhealthconnect.com.au

The Mind Health Connect site of Health Direct. Employed the Git repository system with Stash for branch-based development with Features module-code generation in a multi-stage Drupal environment on Amazon Web Services and Capistrano deployment automation. Included custom PHP coding, Drupal theme templating and CSS/SASS styling, JavaScript/jQuery coding, and WYSIWYG editor video embedding.

http://www.nhsd.com.au

The National Health Services Directory (NHSD) site of Health Direct. Worked with a multi-stage Acquia Drupal Cloud environment. Developed a responsive Panels home page feature incorporating live embedding of elements using contributed Drupal modules including Features, Views and Views Slideshow. Used *Responsive Design* with CSS style tuning and testing across multiple browsers on multiple desktop, laptop, tablet, and mobile phone devices.

---

https://drupal7demo.webel.com.au

Feb 2014 – *(ongoing)*: Webel IT Australia: An educational technology-assessment site for other Drupal CMS developers, with tutorials and modules demonstrating the Drupal7 custom module development API:

- Includes reviews and demos of many useful Drupal7 core and contributed modules and information on Drupal7-related development topics, as well as extensive issue tracking.
    - https://drupal7demo.webel.com.au/view/modules
- Demonstrates a custom object-oriented PHP bridge module Object-Oriented Examples (OOE) for Drupal7 that aims to demonstrate one of each of the capabilities of the Drupal7 module, form, and theme APIs in pure object-oriented form. Includes unique graphical Unified Modeling Language (UML) models of the OOE module's object-oriented PHP code and of the Drupal7 architecture.

- Demonstrates a custom object-oriented module Flag Plus for creating configurable, coloured, labelled, styled banners for the Flag module, likewise complemented by graphical UML diagrams.

This site is under continual development.

Jul 2010 – Jan 2014: GreenSoft Pty Ltd, Australia is a venture startup company developing a comprehensive online web application product called **GreenDesk** for tracking office building projects applying for the Green Star Office environmental rating system for sustainable office buildings. Drupal CMS is used daily by GreenSoft as the primary system for managing all internal and public information on all GreenSoft projects:

http://greendesk.greensoftaustralia.com

The **GreenDesk** product web site presents information on the **GreenDesk** product, including tutorial trails, screenshot galleries, demonstrations of rich interactive web worksheets, screencast video demonstrations, green technology keywords, and highly cross-referenced help and info pages about the **GreenDesk** system.

http://www.greensoftaustralia.com

A minimal public "business card" company web site for GreenSoft Pty Ltd, Australia.

http://greenbase.greensoftaustralia.com   *(Currently login-only, access available on request)*

GreenBase is a global green certification resources CMS site using Drupal7. It uses Ubercart3 for access subscription e-commerce. It employs advanced use of Views3 query capabilities, such as deep path backlinks, and it makes extensive use of custom Drupal7 database entity (page) types and structured fields to represent the complex credit/point structures of green rating systems, and the subtle relationships between custom entities.

---

https://www.ramp-australia.info   *(Public: access to full functionality requires registration)*

Oct 2013 – *(ongoing)*: Developed using Drupal7 for the Research Ambassador & Mentoring Programme (RAMP) of the German Academic Exchange Service (Deutscher Akademischer Austauschdient DAAD) in Australia, operating from the Goethe-Institute in Sydney. (I am a former DAAD German exchange scholar.) The site features rich user profiles and a keyword-matching system for bringing mentors together with mentees according to their overlapping skills, experience, and areas of expertise, as well as standard community web site features such as blogs. Includes extended user administration features accessible only to authorised staff users. In early 2016 the site was migrated to a secure Virtual Private Server (VPS).

---

http://segoldmine.ppi-int.com   *(Public: access to full functionality requires registration)*

2009 – 2010+: Project Performance International (PPI) is an IT training organisation founded in 1992 that offers courses worldwide in topics including Systems Engineering, Requirements Analysis, and Software Engineering. Webel IT Australia developed a new version of the **PPI Systems Engineering Goldmine** site, employing Drupal CMS technology and PHP scripting to migrate, collate, and serve thousands of web pages presenting useful systems engineering resources such as document downloads, document metadata, and engineering term definitions. The site is under ongoing administration by Webel IT on a dedicated server.

To date the PPI Systems Engineering Goldmine site has over 7000 web pages of engineering resources, a glossary of over 20,000 engineering terms, and is used by over 3000 registered customers and staff.

Web and database engineering activities included:

- Migration of an old file-based web site to a new metadata-driven Drupal CMS web site, with 1000s of web pages of systems engineering resources and limited access document downloads.

- Development of custom PHP style templates for fine control of serving of custom web page types.

- Development of custom Drupal query views for presentation of linked metadata, and custom query views with filters for type-based searches for documents, organisations, definitions, and people.

- Cascading Style Sheet (CSS) styling of all aspects of the site, including styling the site container, formatting of query views, and styling of custom Drupal page types, using Firefox's Firebug plugin.

- MySQL database administration, including use of low-level SQL queries to automate administration tasks and data migration.

- Development of substantial PHP scripts - employing fully object-oriented PHP technology - using Drupal's PHP APIs to automate migration of data, and for administration tasks. Developed a PHP script for generation of a "static" offline version of the site directly from the online version.

- Content processing: incorporation of 100s of systems engineering documents into the developed Drupal CMS system, including extraction of document metadata, identification of engineering keywords, and creation of relationship links to other documents, authors, and organisation pages.

- Administration of the Drupal site, including implementation of fine-grained access controls for different user levels.

- Development of an engineering glossary system with filtered search facilities.

- Advised on use and integration of LDAP directory technology for re-use of customer login data.

- Recording and editing of educational narrated video screencasts demonstrating the site's features.

- Tracking of requirements, measures of effectiveness, features, and issues using the Drupal CMS.

In Oct 2010, in-document search was introduced using the PHP Apache Solr Integration module for Drupal for the Java-based Apache Solr indexing and search system.

---

http://www.aur.no

Apr 2010 – May 2010: Webel employed Drupal CMS technology to develop a minimal "business card" site for Automatisering og Utvikling av Rutiner (AUR), a Norwegian company that promotes automation technologies. The AUR site uses Drupal's internationalization (i18n) support and language switching. *(Language serving/switching behaviour may depend on your web browser and system language settings.)*

---

https://www.ethicalemarket.com

Jun 2009: The **ethical eMarket** site developed for Webel IT Australia puts an ethical spin on affiliate marketing, offering evolving criteria that can be influenced by registered users' votes, comments, and a forum. It also showcases Drupal custom page types and query views technologies, and manages all affiliate advertising product metadata pulled from various advertising sources via the Drupal database. A custom Drupal module integrates "click-through" data available in different forms from the various advertisement sources. The site shares a Drupal module codebase kit using Drupal's multi-site principle, but with its own database, theme, and media files areas, mapped from a standalone domain.

The animated logo was developed using PureData/GEM patch-based real-time video synthesis:

- https://www.webel.com.au/puredata/demo/logo/ethicalemarket

---

https://play.webel.com.au

May 2009: The PLAY music and art site serves as the Drupal Ubercart e-commerce module demo for Webel IT Australia. Buy original music MP3s and digital media online via integrated PayPal, and see Drupal media modules at work. The site uses a custom theme, custom data types and query views, custom shopping cart product classes, currency modules, purchase-protected digital downloads, Flash, MP4, and MP3 media players, media rating, and image galleries. (It also demonstrates audio recording, mixing, and editing with Ableton Live and video production and editing with Final Cut.) It shares a Drupal module codebase kit using Drupal's multi-site principle, but with its own database, theme, and media files areas.

The animated logo was developed using synchronised PureData/GEM real-time audio and video synthesis:

- https://www.webel.com.au/puredata/playlogo

---

http://www.time2exercise.com.au

May 2009: Australian fitness guru Hadyn Muir's time2exercise web site was migrated from JSP/XML to Drupal CMS technology. The site features exercise class timetables using Drupal CCK and Views, Drupal forums, and Image galleries based on custom views. Runs on a shared web hosting client account.

---

http://www.unseentv.tv   *(Inactive)*

Apr 2009: Webel redeveloped, extended, and maintained the Drupal-driven site of former client Unseen TV, Australia's first online video web site. Improvements and services included:

- Introduced a video keywords system and tag clouds, and display of keyword/tag search links.

- Improved RSS XML feeds, feed links, Twitter feed aggregation, and a syndication overview.

- Introduced a newsletter authoring, subscription, and distribution system leveraging the Drupal Simplenews module including:

  o A composite layout newsletter composed of modular elements that can be independently edited for future newsletter editions, with Drupal views for accessing newsletter elements.

  o Tuning and testing of the newsletter layout for readability on various email clients.

- Developed PHP-scripts and a web interface for automated migration and management of various newsletter email subscription databases and resources to the Drupal Simplenews system, and for executing bulk administration actions on the large newsletter subscription databases conveniently.

All development actions were tracked on a separate development system and test-bed, so that the client could navigate by hyperlinks from time-stamped descriptions of satisfied requirements and features to examples of the implemented deliverables on the live server.

---

https://www.webel.com.au   *(Public: end-of-line Drupal6, currently under migration to Drupal8)*

Nov 2008 – *(ongoing)*: Having already made a positive experience with Drupal CMS as consultant to software group No Magic Inc., it was decided to redevelop the main Webel IT Australia site (which had formerly used JSP, XML, and XSLT) to use Drupal6 CMS technology. This was a major undertaking, designed to showcase Drupal CMS core and contributed module technologies while drawing on large volumes of content and media from UML, Java, C++, and XML software engineering and systems engineering work and Webel IT software engineering training courses – especially graphical UML and Java engineering - as well as past scientific work, and featuring research and development (such as the NeXML Schema system for the neutron science data format, and inventions like the unique Drancing real-time accelerometer music and visuals synthesis system, and PureData synthesis projects).

At the time of writing the site contains over 3000 pages of detailed content, 100s of attachments (including publications and reports as PDF), over 1000 tutorial diagrams and research & development project images (each allocated to one or more of many custom image galleries), and rich media such as locally served and embedded videos as MP4 and Flash, MP3 audio samples, and narrated tutorial screencast videos.

During development of the site hundreds of core and contributed modules were systematically reviewed and tested, so that a reliable and well-maintained Drupal module codebase kit could be offered to clients.

This "tech2tech" site is designed to expose Drupal CMS features and other web technologies for discussion with clients, Drupal developer colleagues, and students, and the custom theme is likewise designed to emphasise how Drupal site layouts are composed of blocks. Just some of the features of the site include:

- Database-driven online résumé and profile with cross references to illustrative content zones.

- Cross-referenced professional service and demonstration content zones.

- Extensive use of Drupal custom content types and custom views, with about 100 custom types.

- Custom theming and sub-theming with customised display templates per content (page) type.

- Custom database query view reports per content type offering alternative navigation strategies.

- Multiple taxonomies of tags/keywords and categories with tag clouds for linked keyword searches.

- Parallel use of taxonomy tree based navigation and hierarchical "physical" book/zone structures.
- Taxonomy-based site maps and linked tree overviews of hierarchical zone page structures.
- Assignment of images to multiple custom galleries with various custom image-cache views.
- AJAX-base menus for efficient access to large hierarchical book/zone structures.
- Embedded video streaming and local video and audio players.
- Rotating Views Slideshows of selected images for efficient use of screen real estate.
- Large slideshow of all images on the entire site, from all galleries.
- Lightbox viewer for full size images triggered from image-cache previews.
- Multiple contact and feedback forms.
- Blogs and RSS Feeds.
- Composite page layouts for building multi-column newspaper style pages from page elements.
- Composite newsletter, with modular snippets and flexible layout system for allocation of cells.
- Customised JavaScript-based banner menus.
- Voting and five-star rating systems.
- Online review of many Drupal6 modules.
- Systematic use of automated page and view link referencing, avoiding error-prone link editing.
- Systematic use of Replacement Tags for repeated HTML markup, to afford style consistency.
- Site statistics and system logging.
- Zone-specific access controls.
- Use of automated tokens for filepaths for uploads.
- Extensive use of Node Blocks allocated to theme regions.
- Image-based CAPTCHA secure login challenges and security modules.

---

http://school.nomagic.com   *(Archival: site and domain migrated since by client)*

2007 – 2008: Founded the MagicDraw UML and SysML eSchool using Drupal6 with around 1000 pages of educational examples of applications of UML and SysML to software engineering and systems engineering, for an audience of over 250,000 customers and for the wider UML community. Google Analytics showed a steady month-to-month growth of 30% for the popular site. The site was also used to share UML and SysML analysis resources with members of OMG Revision Task Force working groups. The site was primarily text and image based, with UML diagram images accompanied by rich tutorial text and cross-referenced pages.

For a database-driven, online record of all employment, consultancy, and R & D activities please visit also:
https://www.webel.com.au/activities

4) Appendix: Web, IT, software engineering, and media skills

Please also visit this online database of technologies: http://www.webel.com.au/technologies

	Web UI/UX	Style/ Layout	Data	CMS Web sites	SQL	Database/ Persistence	Enterprise Architecture	Object-Orientation	LAMP	Video	Audio	Graphics	Flash	Devel
HTML/ XHTML/HTML5	X	X												
DHTML/DOM	X	X												
JavaScript/ JQuery	X	X												
AJAX/JSON	X		X											
CSS/SASS	X	X												
XML			X			X								
XML Schema			X			X	X	X						
XSL/XSLT transformations		X	X											
SQL/MySQL					X	X			X					
Oracle DB					X	X	X							
ObjectDB					X	X	X	X						
PHP	X	X		X	X	X		X	X					
Drupal CMS	X	X		X	X	X				X	X		X	
Plone CMS				X										
JPA2 database object-relational (EclipseLink, Hibernate) JDO/JDOQL			X		X	X	X	X						
Enterprise Java (Java EE)							X	X						
Glassfish (JavaEE Server)							X	X						
JavaServer Faces/ JavaServer Pages	X	X					X	X						
SOAP/WSDL							X	X						
REST/WADL							X							
C++								X						
Design Patterns							X	X		X	X			X
Graphical UML MOF/XMI/OCL							X	X						X
Graphical SysML							X	X						X
Eclipse Modeling Framework (EMF)							X	X						X

	Web UI/UX	Style/ Layout	Data	CMS Web sites	SQL	Database/ Persistence	Enterprise Architecture	Object-Orientation	LAMP	Video	Audio	Graphics	Flash	Devel
Model-driven Architecture(MDA)						X	X	X						X
Linux admin									X					X
Apache HTTP/ Apache Tomcat									X					
Perl								X						
Bash/Zsh/Csh									X					
Final Cut										X	X			
Ableton Live											X			
Screencasting ScreenFlow										X	X	X		
Graphics Photoshop/ Illustrator/ GIMP (Linux)/ PixelMator (Mac)												X		
Patch synthesis PureData/Max MSP										X	X	X		
Symbolic algebra Maple/ Mathematica/ MATLAB/SimuLink	X		X					X		X	X	X		X
Code development Netbeans IDE/ Eclipse IDE	X	X	X		X	X	X	X	X					X
Java RMI/ CORBA IDL							X	X						
Git repository/ versioning						X								X
Subversion (SVN)						X								X
JIRA Issue Tracker/ JIRA Agile/ Bugzilla														X
Symfony/ Doctrine ORM						X	X	X						X