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Educational resources

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<http://www.educa.fmf.uni-lj.si/izodel/dela/Colos.04/FreeEdu.pdf>



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Free Educational Resources

To support the *informatization* of education teachers and students should be provided with:

- teaching/learning *materials* (programs, lectures, tests, ...);
- friendly, easy to use *tools/environments* to produce their own materials or to adapt the existing ones;
- *resources* (libraries of algorithms, texts, pictures, sounds, videos, data, ...) needed to produce these materials.

Since the educational budgets are usually scarce we would like that most of these tools and resources would be:

- *freely available* for educational use in the school and at home;
- *open* (can be inspected inside) and can be *modified*.

Example: Teaching With Documents

D-Day Message from General Eisenhower to General Marshall

TOP SECRET **TOP SECRET**

SHAEF
STAFF MESSAGE CONTROL
INCOMING MESSAGE

SHAEF CP SHAEF 83/06
Filed 060800Z June TOR 060930Z June

EYES ONLY

U R G E N T

FROM : SHAEF COMBAND POST, PERSONAL FROM GENERAL EISENHOWER
TO : AGWAR-TO GENERAL MARSHALL FOR HIS EYES ONLY; SHAEF FOR INFORMATION
REF NO : 90016, 6 June 1944

Local time is now 8 in the morning.

I have as yet no information concerning the actual landings nor of our progress through beach obstacles. Comminage will not be issued until we have word that leading ground troops are actually ashore.

All preliminary reports are satisfactory. Airborne formations apparently landed in good order with losses out of approximately 1250 airplanes participating about 30. Preliminary bombings by air went off as scheduled. Navy reports sweeping some mines, but so far as is known channels are clear and operation proceeding as planned. In early morning hours reaction from shore batteries was sufficiently light that some of the naval spotting planes have returned awaiting call.

The weather yesterday which was original date selected was impossible all along the target coast. Today conditions are vastly improved both by sea and air and we have the prospect of at least reasonably favorable weather for the next several days.

Yesterday, I visited British troops about to embark and last night saw a great portion of a United States airborne division just prior to its takeoff. The enthusiasm, toughness and obvious fitness of every single man were high and the light of battle was in their eyes.

I will keep you informed.

DISTRIBUTION:

1. SUPREME COMMANDER ✓
2. CHIEF OF STAFF
3. SCS
4. Gen. Strong (6-2)
5. Gen. Bu (6-3)

DECLASSIFIED
DOD DIR. 5200.10, June 29, 1960
NE by WGL date 6-29-87

TOP SECRET

COPY NO 1
SUPREME COMMANDER

466
171



... Free Educational Resources

Free for the users. There can be different ways to 'pay' the authors for their work.

Learning from the masters by inspecting the inside.

Modifying objects to adapt them for our own needs (localization – translation, changing or adding functionalities, ...).

Developing by building with blocks.

everything by ourselves – everything from beginning – never finished

Establishing libraries/collections/repositories of educational resources. They should contain 'friendly resources' – no malicious code (virus, spyware,...) and non offending (race, sex, gender,...).

Collections/Repositories

First established already in pre-WWW times based on FTP.

Internet sites as a common place for exchange of resources.

- Simtel, C|Net, WinSite, Tucows, Stroud's CWSApps.
- NASA, Free pictures index, Heraldry.
- Explorer, Utah Education Network, Digital classroom.
- MIT, Rice, berkeley, Public Library of Science, BioMed Central.
- Project Gutenberg,
Zbirka slovenskih leposlovnih besedil, Beseda.
- Data and Story Library / StatLib, The CIA World Factbook.

Virtual Software Library

The father of **Virtual Software Library** (now C|net) is **Žiga Turk**:



Other resources for searching

If you're looking for freeware or shareware (and they're not the same -- you're supposed to pay for shareware), try the Virtual Software Library, which allows searching and retrieval of more than 130,000 files. The library was started by Professor Ziga Turk at the University of Ljubljana, Slovenia, but has recently moved to a new site at a company that calls itself c|net: the computer network (<http://vsl.cnet.com>). [02 Mar 1997: now called Shareware.Com, <http://www.shareware.com>.]

from EEI Communications, November 1995

Simtel / Education / Mathematics

HOME > EDUCATION > MATH-RELATED PROGRAMS


Filter by: **FILTER!**

Sort by: Direction: **SORT**

Math-related Programs

Found: 302. Displaying: 21-30


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 **< PREV** **NEXT >**

 **Flash Math 1.03** **ADD** **DOWNLOAD NOW** **DAP**

Released: Nov 08, 2003 OS: Handheld License: Shareware Price: \$2 User Rating: N/A

Children in years past have always practiced their basic mathematics by using flash cards. This learning methodology is highly effective in sharpening children's computational capacity but lacks dynamic feedback. Flash Math duplicates the positive aspect of flash cards and provides dynamic feedback. Also, Flash Math scales problems according to children's proficiency so that they are not frustrated by difficult problems or unchallenged by less intricate equations. The problems presented are for children in grades first through third in a standard US school curriculum.

Downloads: 50 File Size: 148.44 KB Company: Phan Network Web Site: <http://www.PhanNetwork.com>

 **LabStat 3.10.15** **ADD** **DOWNLOAD NOW** **DAP**

Released: Oct 14, 2003 OS: Windows 95/98/ME/XP License: Freeware Price: - User Rating: 83.33%

LabStat was written for research professionals who often compile sample data from raw data files. In manual mode, LabStat is also ideal for student work in lab courses: From data entry to analysis, LabStat demands fewer and less complicated steps than Excel and other Windows software. - Build 3.10.15 fixes bugs with correlation operations. - Users running 3.8.1 or later need only download the updated EXE file from the LabStat website.

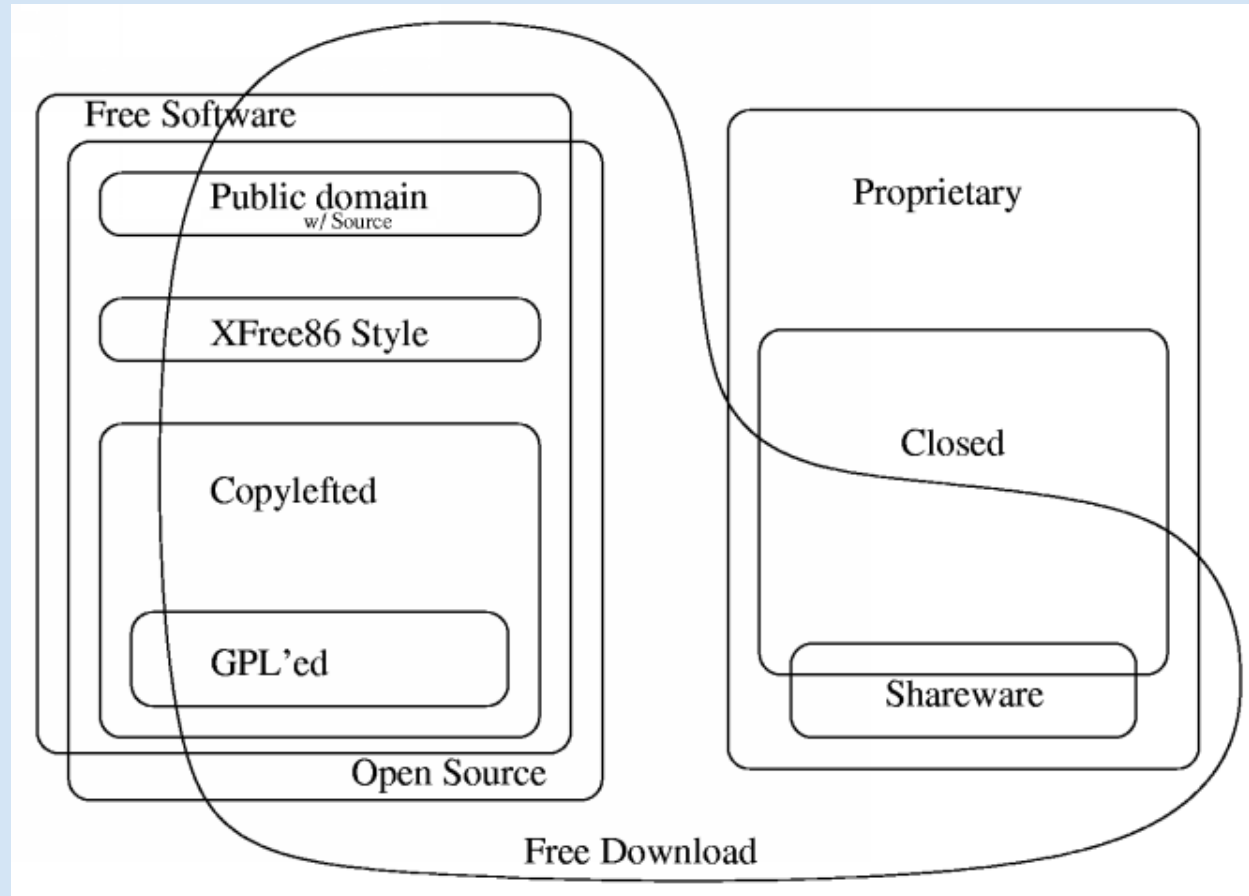
Downloads: 601 File Size: 1.38 MB Company: S. A. DeCaro, Ph.D. Web Site: <http://software.sdeconet.com/labstat>

WinSite / Education / Mathematics

InfoCard@WinSite		
Program Name	Mathomatic	Download Now Get this on CD
Description	Symbolic Math Program	
Version/File	11.1c	winam.zip
Date	18 May 04	
License/Cost	FreeWare	
Runs on	Win 95/98/ME/NT/2000/XP	
File Size	811K	
Requirements		
Language		
Downloads	392	
Submitted By	George Gesslein II	
Company	http://www.mathomatic.com	
User Rating	Waiting for first 5 votes.	Vote Here
User Comments	No Reviews	Submit Review

Mathomatic is a small, portable symbolic math program that can automatically solve, simplify, differentiate, combine, and compare algebraic equations, perform polynomial and complex arithmetic, etc.

Categories



Categories of software by Chao-Kuei.

Licences

- *Public* / Center for the Public Domain
- *Free* / GNU, The FreeBSD Copyright
- *Open* / Open Source Initiative, Open Content, Open Access
- *Share* / Association of Shareware Professionals, Trialware Professional Association
- *Commercial* / U.S. Copyright Office

The *public domain* is a space where intellectual property protection does not apply. When copyrights and patents expire, innovations and creative works fall into the public domain. They may then be used by anyone without permission and without the payment of a licensing fee.

GNU

GNU Operating System - Free Software Foundation

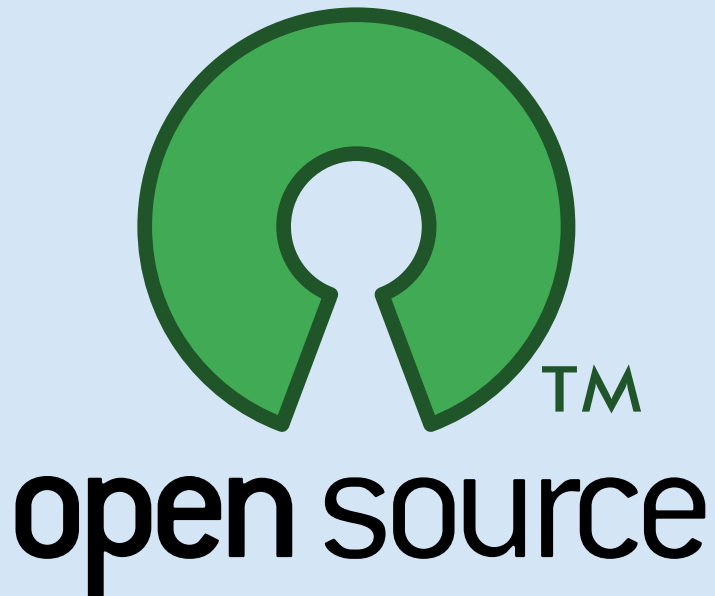


Free as in Freedom

Welcome to the GNU Project web server, www.gnu.org. The [GNU Project](http://www.gnu.org) was launched in 1984 to develop a complete UNIX style operating system which is [free software](http://www.gnu.org): the GNU system. (GNU is a recursive acronym for "GNU's Not UNIX"; it is pronounced "guh-noo.") Variants of the GNU operating system, which use the kernel Linux, are now widely used; though these systems are often referred to as "Linux," they are more accurately called [GNU/Linux systems](http://www.gnu.org).

This is also the web site of the [Free Software Foundation](http://www.fsf.org) (FSF). FSF is the principal organizational sponsor of the GNU Project. FSF receives very little funding from corporations or grant-making foundations. We rely on support from individuals like you who support FSF's mission to preserve, protect and promote the freedom to use, study, copy, modify, and redistribute computer software, and to defend the rights of Free Software users.

Open source



”The basic idea behind open source is very simple: When programmers can read, redistribute, and modify the source code for a piece of software, the software evolves. People improve it, people adapt it, people fix bugs. And this can happen at a speed that, if one is used to the slow pace of conventional software development, seems astonishing.

We in the open source community have learned that this rapid evolutionary process produces better software than the traditional closed model, in which only a very few programmers can see the source and everybody else must blindly use an opaque block of bits.”

Our experiences with free materials

- we got the Wirth's pascal compiler in RRC Ljubljana in 1974;
- in mid eighties we started to use **T_EX**, and later also **Ghostscript/Gsview**;
Support (project Ro) of distribution of **TUG**'s edition of **T_EX** CDs;
- around 1990 LogoS – an interpreter for the slovenian dialect of logo was developed for PC/DOS. From 1994 on each new version of **MSWlogo**'s GUI is translated in Slovenian;
- **Lokar**'s collection of mathematical educational programs;
- **SIO** catalogs;
- Panel **INFOS 2000**, ...

Creative Commons

free as the air to common use

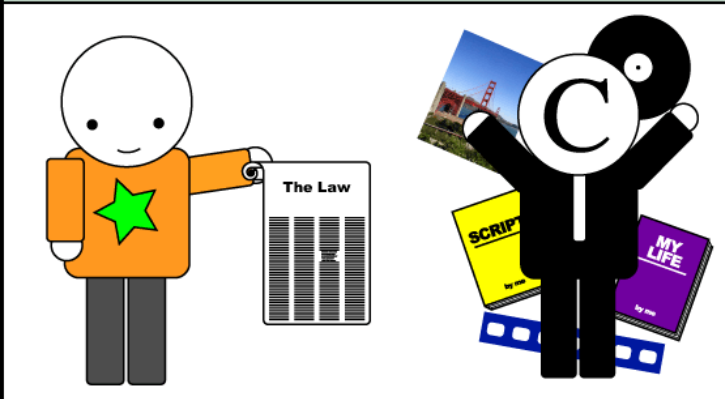
From the CC legal concepts:

”Creativity and innovation rely on a rich heritage of prior intellectual endeavor. We stand on the shoulders of giants by revisiting, reusing, and transforming the ideas and works of our peers and predecessors. Digital communications promise a new explosion of this kind of collaborative creative activity. But at the same time, expanding intellectual property protection leaves fewer and fewer creative works in the ’public domain’”

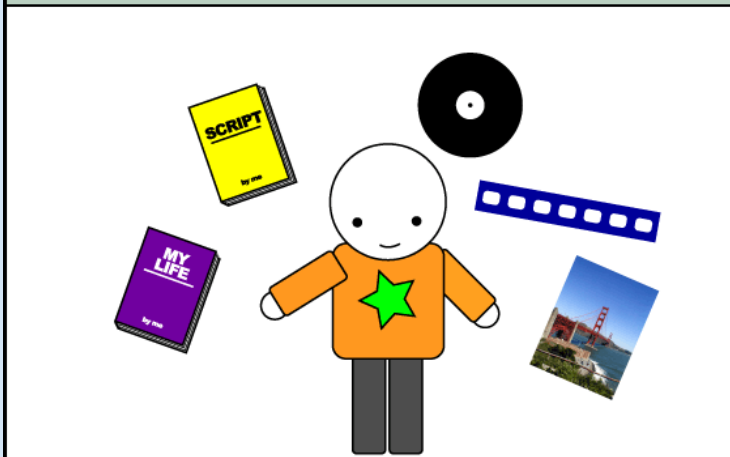
”Following legislative changes in 1976 and 1988, creative works are now automatically copyrighted (also in U.S.). We believe that many people would not choose this ”copyright by default” if they had an easy mechanism for turning their work over to the public or exercising some but not all of their legal rights. It is Creative Commons’ goal to help create such a mechanism.”

... Creative Commons

WHEN YOU CREATE A WORK, IT'S AUTOMATICALLY PROTECTED BY FULL COPYRIGHT -- WHETHER YOU FILE FOR PROTECTION OR NOT; WHETHER YOU DISPLAY THE COPYRIGHT SYMBOL (C) OR NOT. THIS IS FINE FOR PEOPLE WHO WANT CONTROL OVER EVERY LAST USE OF THEIR WORK, BUT WHAT ABOUT THOSE PEOPLE WHO WANT TO SHARE THEIR WORK ON CERTAIN TERMS?



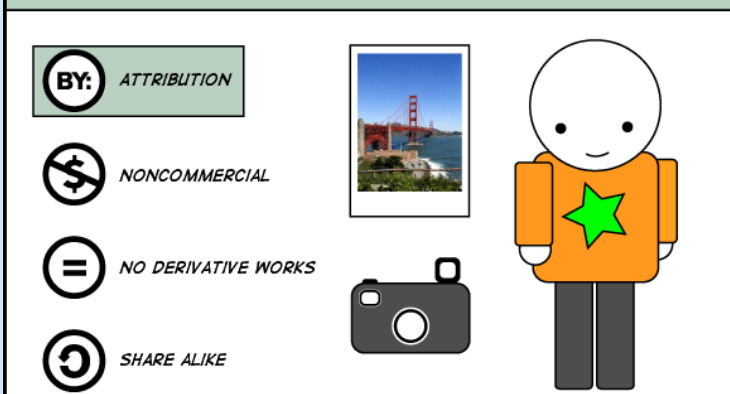
OUR LICENSES ARE DESIGNED FOR THOSE FOLKS -- THOSE WHO UNDERSTAND THAT INNOVATION AND NEW IDEAS COME FROM BUILDING OFF EXISTING ONES.



EVERY CREATIVE COMMONS LICENSE ALLOWS THE WORLD TO DISTRIBUTE, DISPLAY, COPY, AND WEBCAST YOUR WORK -- PROVIDED THEY ABIDE BY CERTAIN CONDITIONS OF YOUR CHOICE.



THERE ARE FOUR CONDITIONS YOU CAN APPLY WITH A CREATIVE COMMONS LICENSE. THE FIRST IS AN **ATTRIBUTION REQUIREMENT**. LET'S SAY THAT I'M A BUDDING PHOTOGRAPHER AND WANT TO GET MY NAME AND WORK OUT ON THE WEB. THE ATTRIBUTION OPTION LETS PEOPLE FREELY REDISTRIBUTE MY PHOTOS AS LONG AS THEY GIVE ME CREDIT.



Creative Commons Educators' and Scholars' Corner

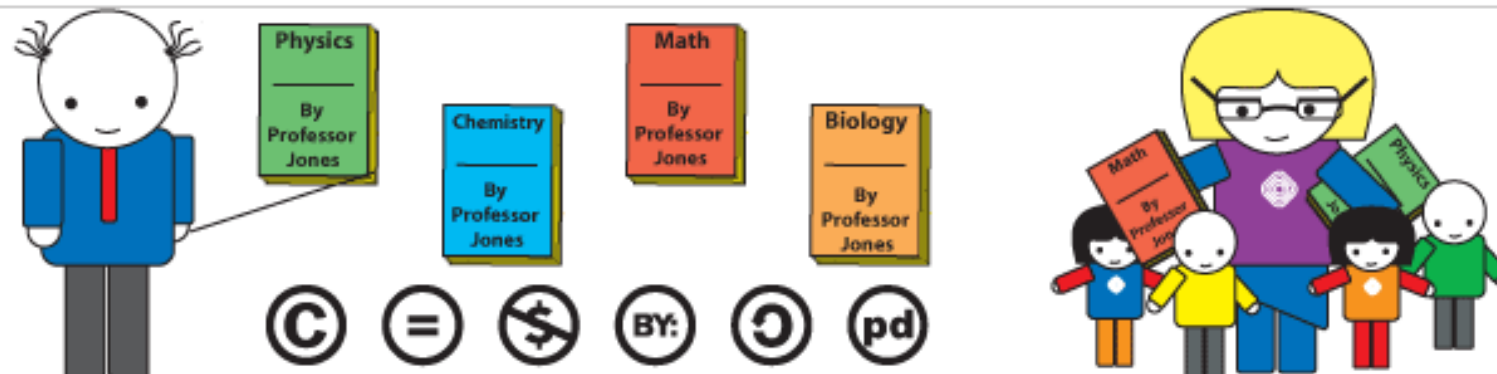
Do you want people to redistribute your research and writings widely, as long as they give you credit?

Do you mind if people copy your materials, so long as they don't make money off them? Provided that they share the materials built from yours with the world on the same terms?

Do you like the idea of other people making new works based on yours – provided they offer those derivations back to the public on the same terms?

Do you want to help create and have access to a pool of royalty-free educational material?

If you publish your educational materials online...



Creative Commons provides an interface so that the world knows how they can distribute or re-use your educational materials. We can also help you find material to share and build upon.

...licences

Existing licensing schemes support the coexistence of commercial and free resources.

The *same price everywhere* principle used by most vendors of resources is also one reason for wide spread of unauthorized copying (pirates). In the last years some vendors are adapting to the markets by different pricing of localized versions.

A big issue in our field are the software patents.



League for Programming Freedom

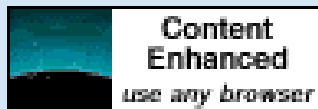
Scripting, Platform independence, Standards

Using scripting languages (Perl, Python, ...) blocks for partial tasks can be combined together into more complex solutions.

Unfortunately most users are not programmers. For them systems with implicit programming (Record, Play) can be the answer.

Platform independent resources can be used on different platforms – types of computers. This is an old idea – Fortran, T_EX; fundamental for web resources.

Platform independence is supported by standardization.



In last years several standards are expressed as XML based markup languages.

Resource standards

Scorm, ariadne, IEEE, IMS, ALIC, ISO-jtc1.

AICC - Aviation Industry CBT (Computer-Based Training) Committee, docs.

Adobe, XMP, dl.

Semantic Web, RDF - Resource Description Framework, RSS - Really Simple Syndication.

CC Metadata

```

<rdf:RDF xmlns="http://web.resource.org/cc/"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<Work rdf:about="http://example.org/gnomophone.mp3">
  <dc:title>Compilers in the Key of C</dc:title>
  <dc:description>A lovely classical work on compiling code.</dc:description>
  <dc:creator><Agent>
    <dc:title>Yo-Yo Dyne</dc:title>
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  <dc:rights><Agent>
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  <license rdf:resource="http://www.eff.org/IP/Open_licenses/eff_oal.html" />
</Work>

<License rdf:about="http://creativecommons.org/licenses/by-nc-nd/2.0/">
  <permits rdf:resource="http://web.resource.org/cc/Reproduction" />
  <permits rdf:resource="http://web.resource.org/cc/Distribution" />
  <requires rdf:resource="http://web.resource.org/cc/Notice" />
  <requires rdf:resource="http://web.resource.org/cc/Attribution" />
  <prohibits rdf:resource="http://web.resource.org/cc/CommercialUse" />
</License>
</rdf:RDF>

```

What to do?

- collection of (information about) educational resources on the web (**SIO**);
- localization of selected resources (**Project OKO**);
- active support of production of critical resources (language, history, geography, ...) by initiating projects;
- user education for efficient use of resources and materials;
- local copyright legislation about 'fair use' should be 'education-friendly';
- results of publicly financed projects and other activities should be in public domain;
- support of standards.

Examples

IrfanView: Universal viewer. [Home page](#).

Rasmol: Molecular viewer. [Home page](#), [program](#), [RasWin](#);

Data: [MathMol](#), [1400+ molecular models](#), [the Molecule of the Month](#).

geom SVG: SVG based dynamic geometry system. [Pilat](#);

Support: [Adobe SVG Viewer](#) / [ASV 6 beta](#), [Corel SVG Viewer](#), [JVM](#), [List SIO: SVG](#).

Netlogo: Simulation environment in Java. [Netlogo MIREK 2003](#).

R-project: Statistical environment. [CRAN](#).