

Cabri - making mathematics success simple





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I. PREAMBLE

CABRI, MAKING MATHEMATICS SUCCESS SIMPLE

Thirty years ago, anticipating the evolution of information technology for individuals, a group of determined researchers, driven by their passion for helping students master mathematics, **directed their focus on dynamic tools to help mathematical learning**...

The fruit of many years of research lead to the creation of Cabrilog in the year 2000. A leading publisher of digital teaching resources and applications dedicated to mathematics (algebra, analysis, geometry, trigonometry), for primary and secondary school students. Cabri applications and resources are aimed at all students regardless of ability or level of interest. Applications and resources captivate the attention, encourage interest and participation resulting in students becoming true actors in their own learning experience. Many scientific studies have been performed in countries such as Spain and Switzerland which clearly demonstrate the effectiveness of Cabri resources and tools in the mathematical learning process.

Cabrilog has thus become the **partner of choice worldwide** for many ministries of education, regional decision makers and teaching establishments who concretely support the teaching of mathematics. **Recognized for Pedagogical interest** by the French Ministry of Education, Cabri software today has **more than 200 million users**...

Cabrilog also offers solutions to assist in the deployment of its solutions at large scale, permanent support to users, tailored maintenance of solutions, as well as an **evolution of product and services specific to the needs of each school level and new technology platforms** (multi-device, interactive video projectors, MOOC...).

II. THE COMPANY

CABRILOG

Located in the heart of the French Alps, Cabrilog is a global leader in the international marketplace for digital education, offering interactive educational materials for the learning and teaching of mathematics.



Today, Cabri solutions continue to be designed, developed and marketed by the inventors of the first dynamic mathematics software. This software stems from the scientific results of the research laboratories Grenoble-Alpes University and the french National Science Research Center (CNRS).

Cabrilog relies on its three main areas of expertise which are:

- education: didactical engineering and pedagogical design of digital resources for learning mathematics
- **2 software development:** design of highly interactive 2D and 3D mathematical engines
- **3 ergonomics:** student-centered interfaces.

Both for tablets and computers, Cabri mathematics solutions have been **deployed by more than twenty Ministries of Education**. Cabri technology has been embedded in Texas Instruments calculators since 1992 and adopted by leading text-book publishers: Mc Graw Hill, Pearson, etc. At this scale, the **international recognition** afforded to Cabri improves the perception of European Technology abroad in educational domains. This market sector is coveted by large technology multinationals such as Apple, Google, Microsoft etc.

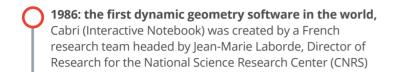
NOTEWORTHY FIGURES:

- More than 200 million Cabri users worldwide
- Didactical foundation recognized internationally for more than 25 years
- Established in **195 countries**
- Around 50 distributors
- Around 20 education ministries deploy
 Cabri (Canada, Colombie, Chili, Espagne, Grèce, Maroc, Mexique, USA, Suisse, Japon, etc.)
- Available in 25 languages
- 70% of revenue dedicated to R&D activities
- 60% increase in revenue for 2015
- Notoriety of the Cabri brand evaluated at 18/20
- 30% superior marks in mathematics (result of an independant study of 15000 secondary school students over 6 years)



II. THE COMPANY

FOR HISTORICAL BACKGROUND...



1988: pioneering software in dynamic maths, Cabri won the Apple Trophy, an award given annually to the best achiever in educational software

1995: Texas Instruments embarks Cabri II in the TI-92 calculators.

2000: the Cabrilog Company was created in Grenoble, France by Jean-Marie Laborde and Max Marcadet, and work began on the development of Cabri II Plus and Cabri 3D software

2003: Cabri Jr. introduces dynamic geometry into popular calculators such as TI-83 and TI-84

2004: distribution of Cabri application (calculators and software combined) has **reached over 200 million copies**

2007: Cabri 3D wins a prestigious BETT Award in the Digital Content: Secondary (Core Subjects)

2010: Cabri offering now covers all mathematics from primary to secondary . Among the 398 multidisciplinary resources in the catalog of the Digital Rural School plan, proposed by the French Ministry of Education, 1 2 3 ... Cabri is the most ordered resource by teachers

2014: Cabri is available on Android, iPad and Windows tablets in several projects in Europe, America and Asia

2015: the Ministry of Education of Chile adopts Cabri apps for tablets to equip all first grade students of primary education in the country

2016: Cabri becomes **available online for use anywhere, anytime and on any device**. More than 400 interactive exercises are now made available using Cabri online by the French Ministry of Education for use by all primary schools using the national NetEduc platform





Cabri - a pledge of quality for teachers of mathematics

Cabri has very significant recognition within the community of mathematics teachers. **Ginkyo**, experts in intangible assets, measured Cabri brand recognition at 18/20 where 14/20 is the best measure for most well known French SMEs. This pledge of quality which secondary school teachers see as representative of Cabri is surely a major factor in their decision to integrate Cabri solutions.



Cabri, remarkable results - demonstrated and unequalled

In 2006, a study commissioned by the **Secretary of Education Madrid**,

demonstrated 30% higher results for students who systematically integrated Cabri in preparation for schoolwork. Would simply repeating this experience at a national scale launch the country to first places in the PISA (Program for International Student Assessment)? This study set out to respond to this pertinent question.

THE IMPORTANCE OF DYNAMIC DIGITAL RESOURCES IN

Studies have shown that digital mathematics resources, notably, those based on dynamic mathematics are able to decisively improve the quality of learning for students of all abilities.

For this reason, Cabrilog chose to introduce the missing pieces to facilitate the democratisation of true dynamic mathematics and true quality in its use:

For students.

learning resources which are deeply interactive, autocorrecting, easy to use and assist learning progression which lasts. The proven pedagogical quality of these resources is renowned by the teaching community worldwide.

For teachers,

powerful and flexible tools which help tailor resources to teaching and learning needs. Modifying or creating resources is effortless not requiring any special expertise or training.



- Interactivity and dynamism
- Ergonomy and ease of use
- Precision and reliability
- Didactical foundation and proven pedagogical approach
- Pedagogically effective





"Students deserve the best technology which empowers teachers to help them correctly learn mathematics..."

Too many exercises and animations offered by publishers and general educational platforms have limited impact on students' learning performance, particularly for students having difficulty learning. They lack studied didactical interactivity. Most of these resources are unable to be modified or only allow very superficial changes by the teacher.

Cabri solutions fit perfectly with:

For students,

active, simple and interactive, due to resources which motivate students to learn by being less abstract, more experimental and interactive

For teachers,

flexibility, extensibility and freedom to make teaching choices, tools which help the teacher to concentrate on teaching by simplifying class preparation and assessment of students' work, new opportunities to encourage students to enter the world of mathematics

The objective is to profoundly improve the level of mathematics nationally.



Cabri - the only dynamic tools conceived and studied for students!

Cabri Clubs in teaching establishments give students the opportunity to voluntarily, out of class hours, in a structured manner, discover and explore the beauty of mathematics and how it applies to the real world. Teachers involved have observed for many years that this free participation in exploring the subject reduces inequality and lowers students potentially blocked advancement in mathematics. This participative exploration has proven more effective than the more traditional use of private tutors which historically have been reserved only to more affluent people. Such willing study gives students self confidence and a genuine taste for mathematics and science.











THE RANGE OF CABRI SOFTWARE

Cabri products are available in two lines, tools (Cabri 3D, Cabri II, New Cabri) and digital resources (Cabri Factory, 1 2 3... Cabri).



DIGITAL RESOURCES

1 2 3... Cabri



Interactive activity books for primary schools.

Each activity book contains several activities which progressively introduce and enforce learning skills (numbers and calculations, units of measure, geometry, data handling). Guided by thinking about questions posed to the user and the available tools, the student calculates, manipulates representations of real objects, digital objects or geometric objects (2D and 3D) which all react in a mathematical way. The student therefore, solves problems due to the learning environment which reacts to actions and responses.

Cabri Factory



All you need for mathematics at middle school level

- Auto Correcting exercises which can be used outside of class, designed for immediate use without unnecessary intervention by the teacher, thus giving more time for teaching.
- Interactive resources based on dynamic mathematics, stimulating thoughtful action and facilitating the acquisition of key concepts.
- Tracking of each students work progress and results.
- The teacher may tailor resources in order to personalise the learning experience based on individual learning processes and lesson planning. In just a few minutes, without prior expertise or knowledge of any particular techniques, it is possible to generate new educational resources.

Interactive activities that adapt to the teaching process - effortlessly.



TESTIMONIAL

Cabri Factory is an innovative solution tailored to teaching needs

"Bringing together excellent learning quality, educational freedom and ease of use for all, we are sure our innovative digital resources meet and exceed the unique challenges of todays teaching environments."

Colette Laborde, Director of Pedagogy

CABRI SOFTWARE **TOOLS**

New Cabri



Teach the maths - not the software

The New Cabri is an instinctive and straightforward environment for creating live learning objects, independent micro-worlds, interactive MOOCs or stand-alone educational apps.

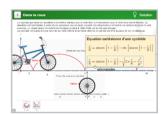
All are active learning resources in which students solve problems and practice skills, both at school and at home, also on-the-move using mobile devices such as tablets. The nature of the software gives students a hands-on experience of maths regardless of teacher expertise in the software, thus improving the learning process.

Unique design concepts which lead to proven results:

A learning environment centred around the student and based on the concept of "Try it to learn it".

The pedagogy and ergonomics of the software is the product of 25 years or R&D in the teaching and learning of mathematics.





Cabri II Plus



Dynamic math and geometry software

All secondary school level mathematics... at your fingertips!

In a few clicks, create geometric and numerical constructions: transformations, measurements and calculus, tables and graphical representations, expressions and equations...

Abstract concepts become clear and the student becomes engaged in mathematical thinking: exploring and making conjectures, reasoning and proving, problem-solving, auto-evaluating...

It is possible to transfer files from Cabri II Plus with Texas Instruments calculators.



Cabri 3D



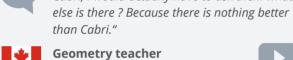
Explore the 3rd dimension with Cabri 3D: the interactive spatial geometry and mathematics software.

Until now three-dimensional geometry was difficult to teach – the complexity of designs in perspective, models that are difficult and time-consuming to construct... Cabri 3D is the only tool that enables you to alleviate these construction difficulties and that also contains the benefits of interactive geometry. Spatial geometry is now simple and accessible for everyone.

Cabri II Plus and Cabri 3D v2 are accredited and recommended as dynamic tools for use with digital whiteboards from the principal manufacturers of this technology.

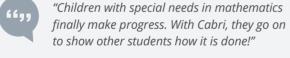
IV. TESTIMONIALS





Canada





School teacher Tessin, Suisse

"I have integrated the use of Cabri with great success as an essential element in my program with respect to the development of self confidence and the understanding of mathematics."

Dr Stephen Arnold Australia

"You can do no wrong using Cabri. Students can develop their mathematical reasoning and logic and may even discover things that the teacher hadn't considered." Lil Engström - Associate Professor Suède

"Cabri is at the center of my research activities. It is a mine of questions for educational instruction. I currently use it to involve students in work that is more than just copying demonstrations."

Sophie Soury-Lavergne - Lecturer and **Professor at IUFM France France**

"Cabri software is so easy to use that any person who can use use a mouse is able to learn to use the basic tools for learning by the end of a single lesson."

Bernardo Camou -Geometry teacher, Uruguay

VI. CONCLUDING REMARKS

COLETTE LABORDE, DIRECTOR OF PEDAGOGY AT CABRILOG



"From the start, Cabri has been developed in direct collaboration with practising teachers, for the realities of today's teaching environment both for them and their students.

The aim of Cabri is to support students in their deep understanding of mathematics. The dynamic functionality of Cabri improves exploration, experimentation and resolution of problems. Cabri uses direct manipulation which helps understanding much more than abstract formulae. Mathematics becomes more realistic to students.

As always, solutions from Cabri excel in their ease of use, mathematical quality and pedagogical value. Most notably, Cabri software as an incredibly long lifespan based on intense research, development and experimentation. This is contrary to the regular appearance and quick disappearance of less valuable educational resources in education.

More than ever with the pervasive deployment of various computing devices such as tablets both in class and at home, it is evident that modern, well developed and practical teaching solutions aimed at improving teaching using the latest technologies and methods is key to success.

The importance of mathematics to culture and the economy is greatly recognized in France and the world over. The principle motivation at Cabrilog is to provide environments that make the learning and teaching of mathematics available to everyone

Colette Laborde - Director of Pedagogy at Cabrilog University lecturer (Didactics of mathematics)



TESTIMONIAL

"This has tremendous potential," I clearly remember thinking to myself when I was first introduced to New Cabri in 2010. (...) I entered the mathematics education field, in large part, because I wanted to find ways to better communicate the beauty, power, and purposefulness of mathematics to elementary and high school students. (...)

With New Cabri, I have been able to create tasks that better promote understanding of the utility of mathematics than ever before. (...)

The Number Stories team often discusses the elimination of the need for a programmer as the biggest benefit of New Cabri. This benefit has indeed cut weeks and perhaps months off of our development cycles, but the power of the authoring interface goes beyond time saved. Not only does New Cabri allow educators to create innovative tasks for students, it turns the activity development process into a tremendous learning experience for the educator. (...)"



Katie Rich - Writter for Everyday

Mathematics collection of Mc Graw Hill &
digital curriculum programmer for CEMSE
(États-Unis)



Cabrilog was founded in 2000 by Jean-Marie Laborde and Max Marcadet. The company designs, develops and distributes digital teaching resources and applications dedicated to mathematics (algebra, geometry, trigonometry) for students and teachers from primary to secondary school levels.

Developed from the scientific results of the research laboratories Grenoble-Alpes University and the french National Science Research Center (CNRS). Cabri applications and resources are distinguished by their interactivity and ease of use for students, flexible tools and extensible resources for teachers.

The activities are subject to a report based on several areas of expertise (didactical engineering and pedagogical design of digital resources for learning mathematics, design of highly interactive 2D and 3D mathematical engines, student-centred interfaces) providing didactical support highlighted by many studies. Of most note is a study which makes a connection between the results from the national testing of Spanish students and the use of Cabri application and resources. The study shows a 30% improvement in results compared to students who do not use Cabri application or resources.

Recognized for Pedagogical interest by the French Ministry of Education since 2010, Cabri software today has more than 200 million users worldwide, having a well deserved place internationally in education.

Proactively, Cabrilog is involved in innovative projects, more particularly with text-book publishers (Mc Graw Hill, Pearson), online learning platform (NetEduc, Number Stories) and Ministries of Education (French Ministry of Education, Chile Ministry of Education, Japan Ministry of Education etc.).