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## The DiaDM Project - A web-based platform for Diachronic Data and Models

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# The DiaDM Project

<http://www.diadm.ish-lyon.cnrs.fr/>

## A web-based platform of Diachronic Data and Models

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### Goals

#### Targeted data

The DiaDM project is a Web-based collaborative platform that aims to compile, organize and explore hypotheses about the putative **processes** by which the diversity of the world's languages came to be and the **structures** of the protolanguages from which today's languages are supposedly derived. The targeted 'data' are therefore reconstruction hypotheses of proto-structures, proto-lexicons and sound change.

#### Targeted goals

The ultimate goal of the DiaDM project is to create tools and resources to manage the evolving universe of data and methods about the evolution of languages in such a way that researchers from inside as well as outside the field of linguistics can easily comprehend their larger context ("what processes justify this reconstruction?"), compare and contrast hypotheses ("where do these two language relationship hypotheses agree and disagree?"), identify patterns and tendencies and synthesize concepts and data into ever more comprehensive and useful models and methods to reconstruct the past of today's languages. As such, the DiaDM Project aims to facilitate the access, development and testing of hypotheses about the evolution of languages by providing a unified framework in which a range of exploratory methods complement a body of comparable and directly interpretable reconstruction hypotheses from diverse language areas and families.

#### Targeted audience

The DiaDM project is designed to allow the community of linguistic experts to author, curate and connect a diversity of proto-language reconstruction hypotheses, and the scientific community at large to access this body of data in a comprehensive and unified format to develop and experiment original analytical approaches. To ensure the quality of the linguistic data is preserved, we have focused on developing a fully public Web resource associated with secure personal workspaces. Interoperability between the DiaDM databases and the major synchronic databases is also

### Architecture

Web-based Platform  
<http://www.diadm.ish-lyon.cnrs.fr/>

Hypotheses Databases

Structures

#### DEEPER

A database of reconstructed lexical items

#### DiaLs

A database of reconstructed protolanguage structures

Processes

#### UniDia

A database of historical sound change hypotheses

Analytical tools

Descriptive

Exploratory

Distributions

Boundary detection

Compatibility landscapes and signatures

Kinetic landscapes in the phonological space

#### Typological

#### Statistical

#### Geographical

#### Genealogical (tree-based)

place	manner	change
		p > p <sup>h</sup>
		p <sup>h</sup> > p
		pt > p <sup>h</sup> e
		p [pn=H] > p [pn=m] <sup>h</sup>
Bilabials > Bilabials 8 categories for 21 rules.	Plosives > Plosives 4 categories for 4 rules.	
	Plosives > Fricative _sib. 2 categories for 12 rules.	p > β
		p > φ
	Plosives > Nasals 2 categories for 5 rules.	p > n <sup>h</sup>
		p > m
Bilabials > Labiodentals 2 categories for 102 rules.	Plosives > Fricative _sib. 2 categories for 102 rules.	p > f
		hp OR p > f
		p > p OR f
		p > v OR β
		p > h OR p
		p > f OR f
Bilabials > Complex 10 categories for 17 rules.	Plosives > Complex 10 categories for 17 rules.	p > f OR h
		p > f OR p
		p <sup>h</sup> > p <sup>h</sup> OR f <sup>h</sup>
		p <sup>h</sup> r > pl
		pd > br
		hp OR p > s OR ts
Bilabials > Alveolars 2 categories for 14 rules.	Plosives > Fricative _sib. 2 categories for 14 rules.	p > s
		hp OR p > s

