



# LENS.ORG

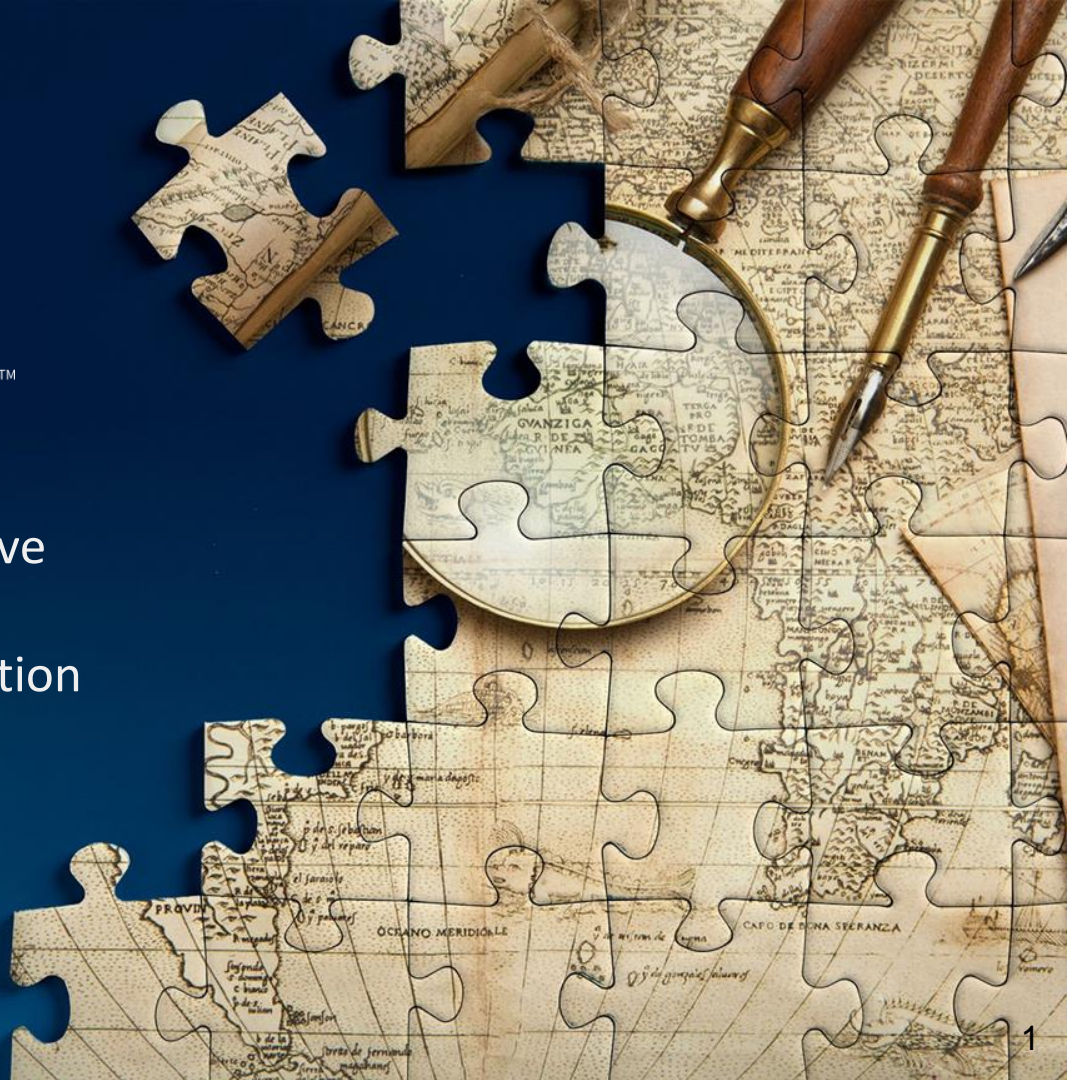
Solving The Problem Of Problem Solving™

## Experiences with open licensing: the Biological Open Source (BiOS) Initiative

World Intellectual Property Organisation  
Standing Committee on the Law of Patents

Dec 4, 2018

Richard A. Jefferson PhD  
CEO & Professor of Biological Innovation





Biological Innovation for Open Society  
Morphed into Biological Open Source  
BiOS

# Timeline

- 1987: First global, open and pre-patent distribution of biological enabling technology (GUS)
- 1988: Use of GUS essential for commercial Ag transgenesis (RR soybean etc)
- 1993: First issued patent (US/GB)
- 1995: Broad tiered licensing program established
- 1999: New open technology (DArT) for Genetic Fingerprinting conceived
- 2000: New open work-around technology (Transbacter) for gene transfer conceived
- 2001: DArT published and patented
- 2005: Transbacter (work around for Agrobacterium) published and patents filed.
- 2005: Feb 10 BIOS licensing initiative launched covering patent commons, MTAs etc.  
GUS, GUS Plus, Transbacter and DArT as open kernel technologies.
- 2005: Feb 10 Massive press coverage in 20 countries, Economist, Nature, NY Times, BBC etc.
- 2005: Feb 10 BioForge online community for cooperative improvements launched, 2500 registered users.
- 2007: more than 200 licensees to open patent licenses and MTAs, including large multinationals (e.g. BASF).
- 2008: BioForge ended, with no significant improvements create or shared, and no compliance with license by public sector actors.



## 'Historical Documents about the BIOS Initiative

### About BIOS

<https://cambia.org/bios-landing/the-cambia-bios-initiative/>

### BIOS Licenses

<https://cambia.org/bios-landing/bios-faqs-bios-agreements/>