



## The Universal Decoder Project

Self-similarity is fundamental in nature. Maple trees have maple leaves! A rose by any other name would look like a rose. These facts of nature can be reduced to algorithmic equations. The Universal Decoder Project is an R & D project to create an algorithmic lexicon of planetary objects that could then be machine-readable.

Imagine holding your cell phone over any natural (and some man made) object(s) and it would 'decode' the image and 'identify' the plant, animal or mineral object. (i.e. this is an angel trumpet plant, this is an aphid, this is laurel, this is a boreal chickadee etc.).

In terms of reach, a Universal Decoder ("UD") is almost of the order of magnitude of the Gutenberg Press for it will open the natural world to anyone and everyone. This capability will democratize information access and empower mankind to better understand the natural world, so essential to living in harmony with our planet.

Applications of the technology will be widespread and will be useful for natural history, general and specialized education, environmental studies, medicine, bio-medical software applications, agriculture, pest control, survival training (i.e.-edible plants), ecological surveys, gardening, recreation, computer modeling, entertainment and others.

UD technology will be installed in hand held telephones and PDIs and sold as part of the cellular telephony service. Even at pennies per month per user, the revenue stream could be considerable - potentially enormous.



*The image on the left is an algorithmic definition of a single rose. The right is a rose*

In nature plants and other phenomena maintain self-similarity across numerous scales. It is theoretically possible to extract a unique algorithm for individual species. The self-similarity of a fern is not exact but there is a sufficient degree of similarity to create a mathematical lexicon of nature that could then be machine-readable.



This image of a spleenwort fern was generated by a simple algorithm.