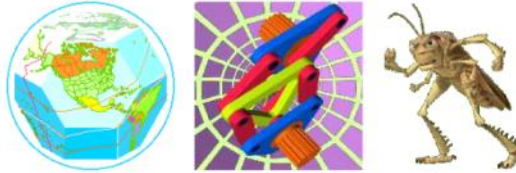


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On Maps, Machines and Roaches

to map a simple machine you need more than a flat sheet of paper



TCDSB Gifted Conference, [Sidney Smith 2111](#), 11AM Tuesday February 15, 2005

Based on an M.Sc. thesis by Dori Eldar

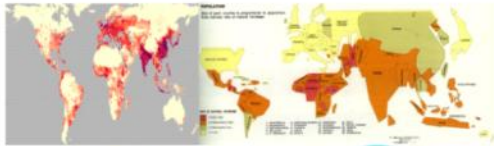
Abstract: We try to map the configuration space of a simple machine, a six-legged idealized roach, and find that cut-and-paste topology can be a lot of fun.

<http://www.math.toronto.edu/~drorbn/Talks/Machines>

and <http://www.math.toronto.edu/~drorbn/People/Eldar/thesis>

*Switch to php-generated javascript-controlled w/ pull down menu.

A TOP MAP: A one-to-one correspondence between places or states of reality and the points of an easily studied surface, so that very close points of the surface correspond to very close places or states, and vice versa.



Better pictures ↴

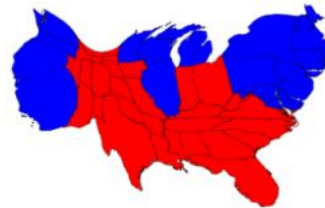
↗ better word?

Election Results by State

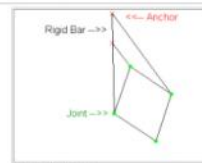


year?
Bush-Core?

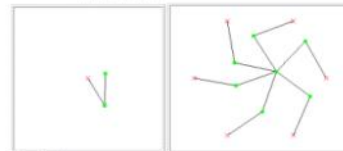
Election Results by State, Blown by Population



↗ remove or improve



Pausanias's Machine

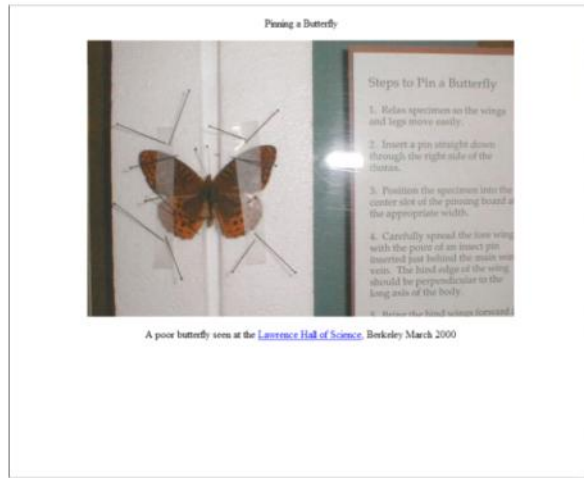


2-Legs Machine

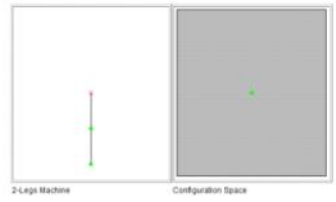
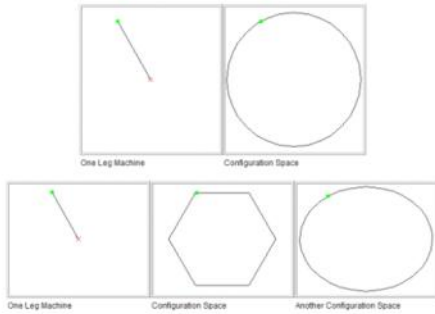


Blue-Black spider (bird eater) - (Peru)
pamphobeteus Antinous

Borrowed from <http://www.bbrinternet.com/~aeroblueblack.htm>

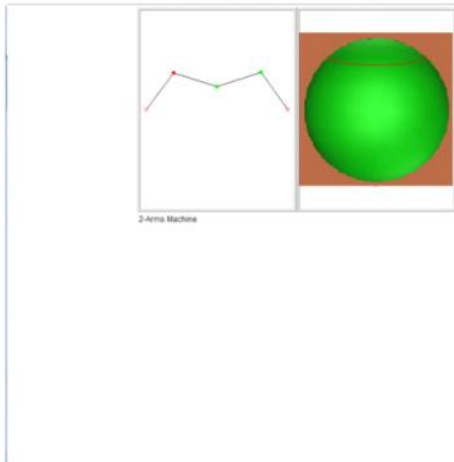



A poor butterfly seen at the [Lawrence Hall of Science](#), Berkeley March 2000



Debug!

Add $0 \rightarrow 360$ ~~X~~





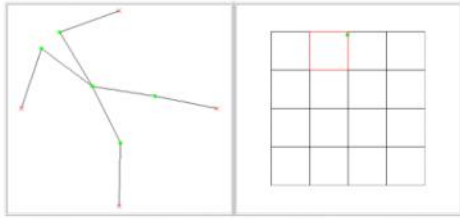
Robert M. Williamson
"Three-Legged Willie"
(1804-1859)

A severe illness at the age of fifteen left R. M. Williamson crippled for life. As a result of the illness, his right leg was drawn back at the knee to compensate, he wore an artificial limb from the knee down, which led to his widely used nickname, "Three-Legged Willie."

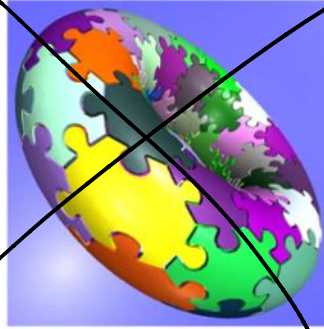
Williamson was born in Georgia about 1804. During his illness, he read widely and was admitted to the bar. He then practiced law for a brief period in Georgia before moving to Texas in 1826. In San Felipe, he helped establish and became editor of a newspaper called the *Cotton Plant*.

An early proponent of self-rule for Texas, Williamson attended the Consultation in 1835. He rode with a cavalry company at the Battle of San Jacinto. After independence was won, he became a district court judge and a member of the Texas Supreme Court.

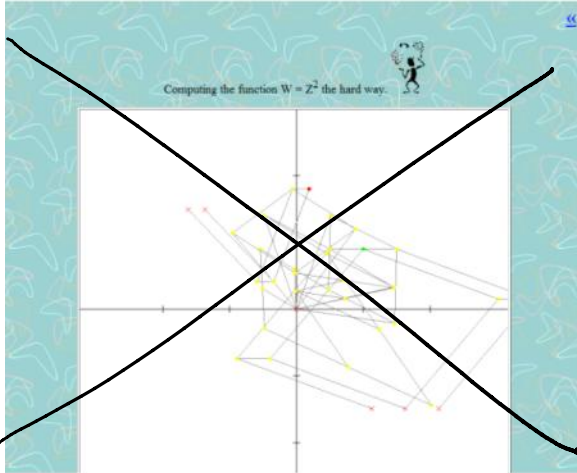
Three Legged Willie remained active in politics for many years. He was elected as a Representative to the Fifth, Sixth, Seventh and Ninth Congresses of the Republic, and as a Senator to the Eighth Congress. After statehood, which he strongly advocated, he served in the Senate of the First and Second



Borrowed from Tom Longtin's page, <http://www.sover.net/~longtin/puzzles/hexgator500.html>, ©1996



v: vertices; e: edges; f: faces; g: genus (holes);
 $v - e + f = 2 - 2g$

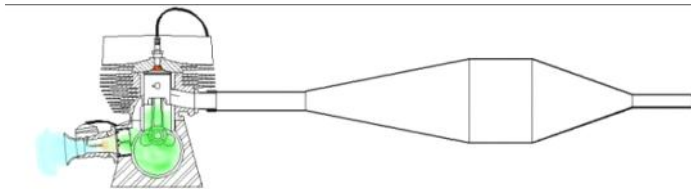


Credits

Deer Bar-Natan, <http://www.math.toronto.edu/~drorbn/Talks/Machinery>
 Dori Eldar, <http://www.math.toronto.edu/~drorbn/People/Eldar.html>

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(from http://en.wikipedia.org/wiki/Two-stroke_engine)

Merge this in, in
 the spirit of
<http://katlas.math.toronto.edu/drorbn/bbs/show?shot=Gadanidis-100726-142426.jpg>