

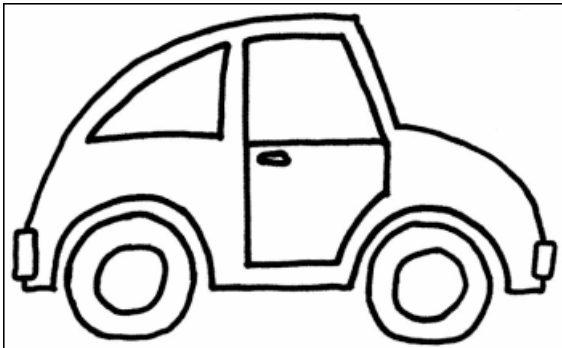
# Magick Tile Puzzles

*Grant McLean*

With a long weekend looming I was casting about for something to keep the kids busy. They like drawing and they like puzzles so with a bit of help from Perl-Magick I managed to buy myself a few minutes of peace and quiet.

## Introduction

I've had some success using Perl to generate simple word and maths puzzles but this time I thought I'd turn my hand to graphics. The idea was to take a simple line drawing like this and turn it into an A4-size puzzle sheet like the one on the next page.



The puzzle is actually a drawing exercise to carefully copy the small jumbled up sections of image into the correct squares in the larger grid, thereby revealing the “big picture”. Helping the kids build confidence in their own drawing and observation skills is one of the secondary goals, after having fun.

Initially, I considered doing the job manually using The Gimp, but that seemed like the sort of painstaking repetitive work that computers were supposed to free me from. I knew that I can do these sorts of simple image manipulations with the ImageMagick library, and with the Perl API it seemed likely I could automate the whole task.

## Installing ImageMagick

The Perl Image::Magick module, also known as Perl-Magick, is available from CPAN, but it also comes bundled in the ImageMagick distribution. The advantage of using the distribution is that you can be sure the version of the Perl binding is compatible with the version of the compiled C library you have installed. On my Debian linux box the installation was as simple:

```
apt-get install perlmagick
```

For other unix or Linux distributions or for Windows, you can download binary and source packages from <http://www.imagemagick.org>.

## Getting Started

I like to start with a small piece of code that works but doesn't do much, then I add little pieces of functionality and test each step. For a small, fun project like this, testing just means running the script to make sure the last change worked. For this project I started with an example from the Image::Magick documentation:

```
1  #!/usr/bin/perl -w
2
3  use strict;
4  use Image::Magick;
5
6  my $image = Image::Magick->new;
7  my $error = $image->Read('car.gif');
8  die $error if($error);
9
10 my $width  = $image->Get('width');
11 my $height = $image->Get('height');
12
13 print "Dimensions: $width x $height\n";
```

When I ran this script, I was greeted with this output:

```
Dimensions: 955 x 715
```

Lines 1-3 of the script enable run-time warnings and compile-time checking for common coding errors. Line 4 imports the Image::Magick module. Line 6 creates