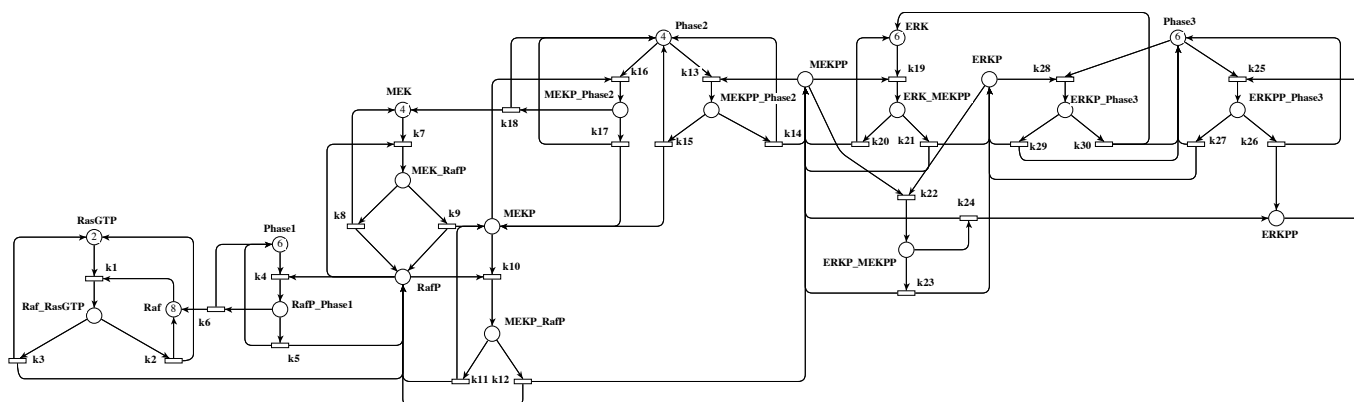


## Introduction

This Model form is a short description of the MAPK model that comes, for the Model Checking Contest 2012 @ Petri Nets, with: a set of PNML files, a set of properties to be checked (possibly one file per model instance) and an optional set of properties concerning the model (invariants, etc. – possibly one file per model instance). For Coloured Nets, equivalent PNML P/T net files are proposed too.

## MAPK



## Presentation

**Description:** This Petri net is extracted from the examples of the data structures and software dependability group of the Brandenburg University of Technology Cottbus and models a biochemical reaction: Mitogen-activated protein kinase kaskade.

**Origin:** <http://www-dssz.informatik.tu-cottbus.de/DSSZ/Examples/Mapk>

### Scaling parameter

Name	Description	Values
$N = N_1 + N_2$	$M_0(MEK) = M_0(Phase2) = N/2$ , $M_0(Raf) = N$ , $M_0(RasGTP) = N_1$ , $M_0(Phase1) = M_0(ERK) = M_0(Phase3) = N_2$	8, 20, 40, 80, 160, 320

## Information about the Model

### Data on the Model

Number of places	Number of transitions	Number of arcs	Scaling parameter value
22	30	90	all

## Stated Properties

safe	✗	free choice	✗	event graph	✗
deadlock	?	state machine	✗	reversible	?

## Other Properties (not mandatory)