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MPNP: Petri Net Processes Modeling and Simulation Tool for Mobile Devices

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Petri Nets

Petri nets represent a popular formalism for the specification and verification of

- ***parallel,***
- ***asynchronous,***
- ***distributed,***
- ***nondeterministic***

systems.

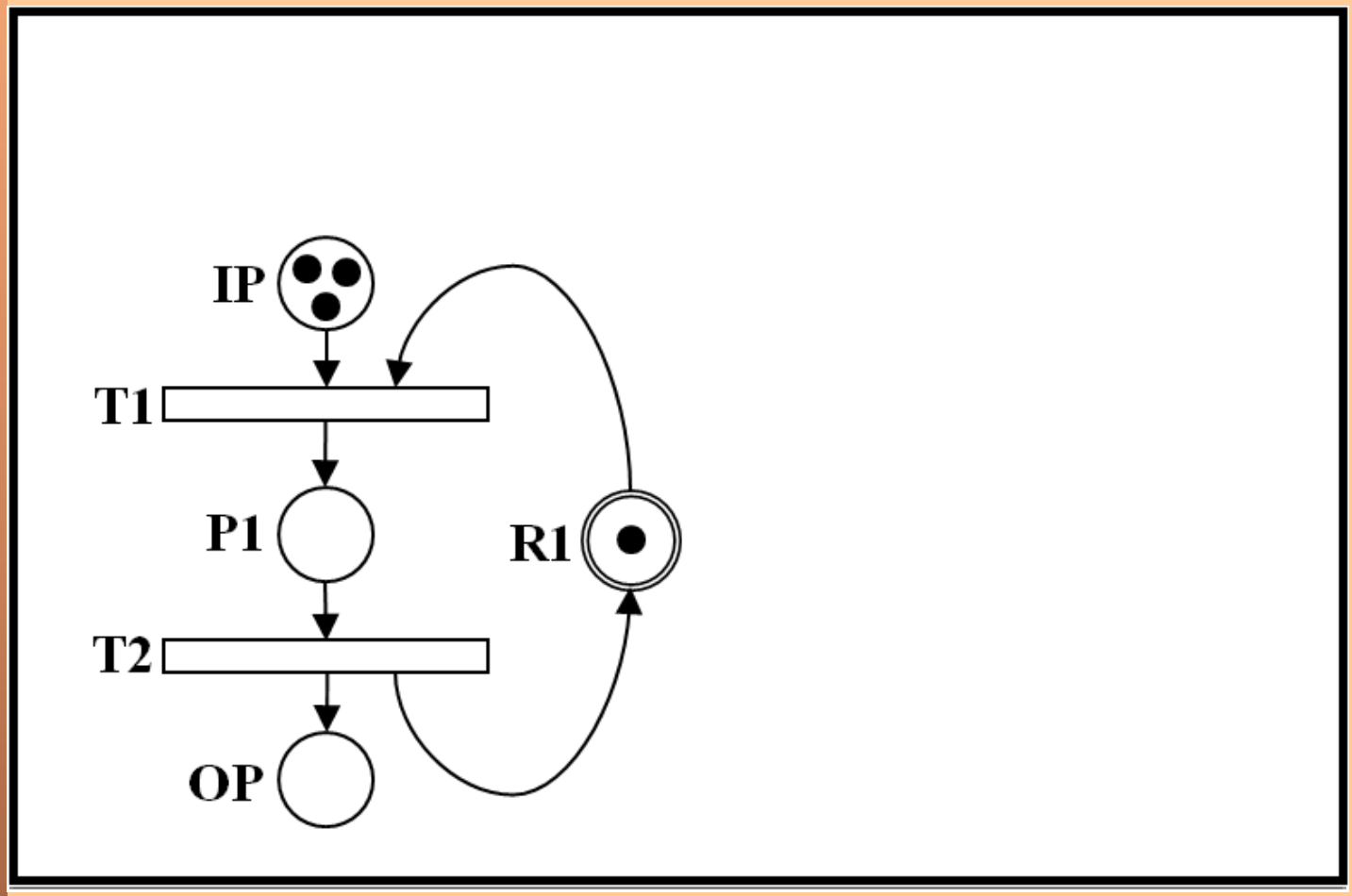
Petri Nets

Carl Adam Petri

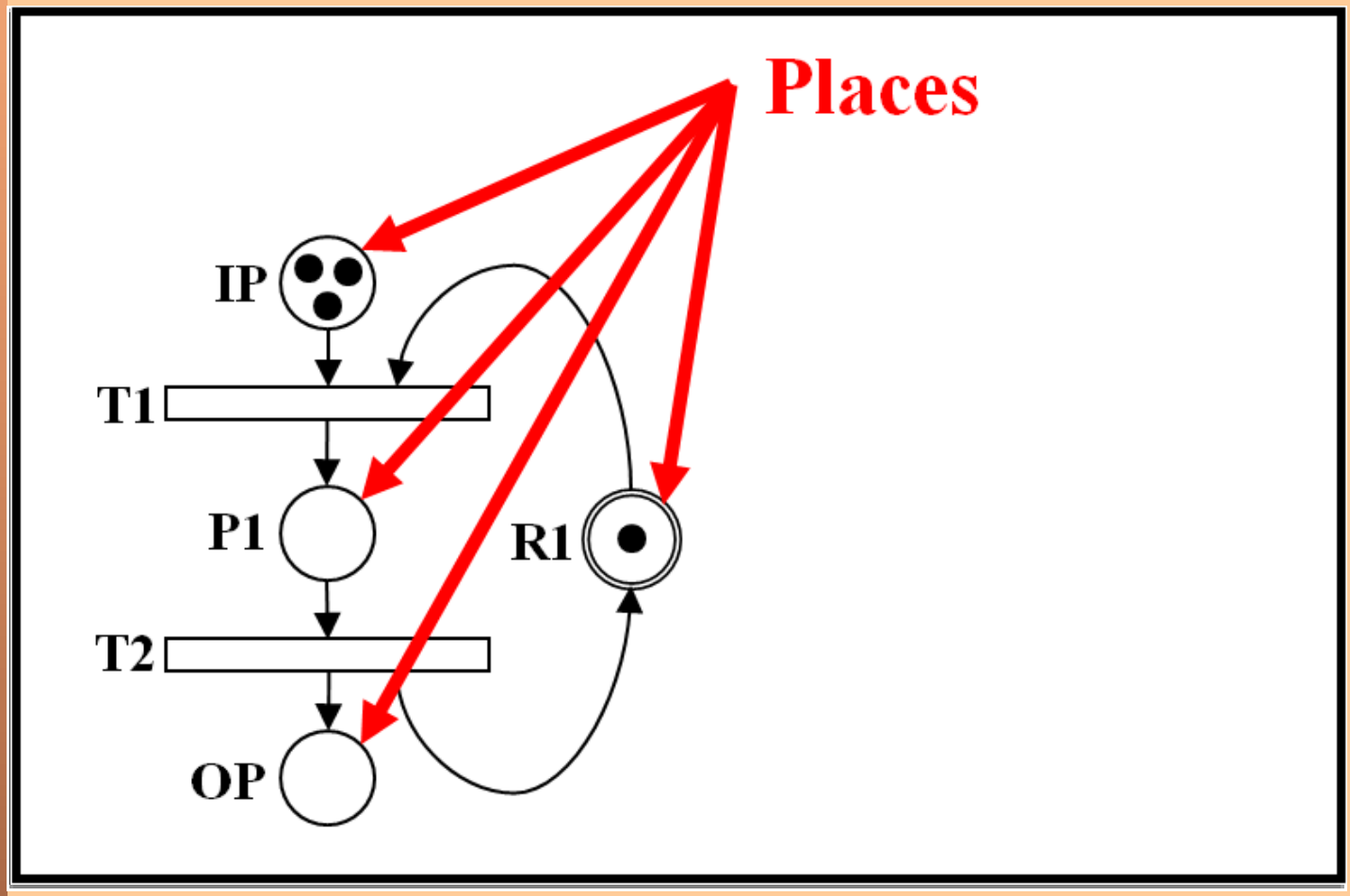
Kommunikation mit Automaten

PhD Thesis
University Bonn
1962

Petri Net Processes



Petri Net Processes



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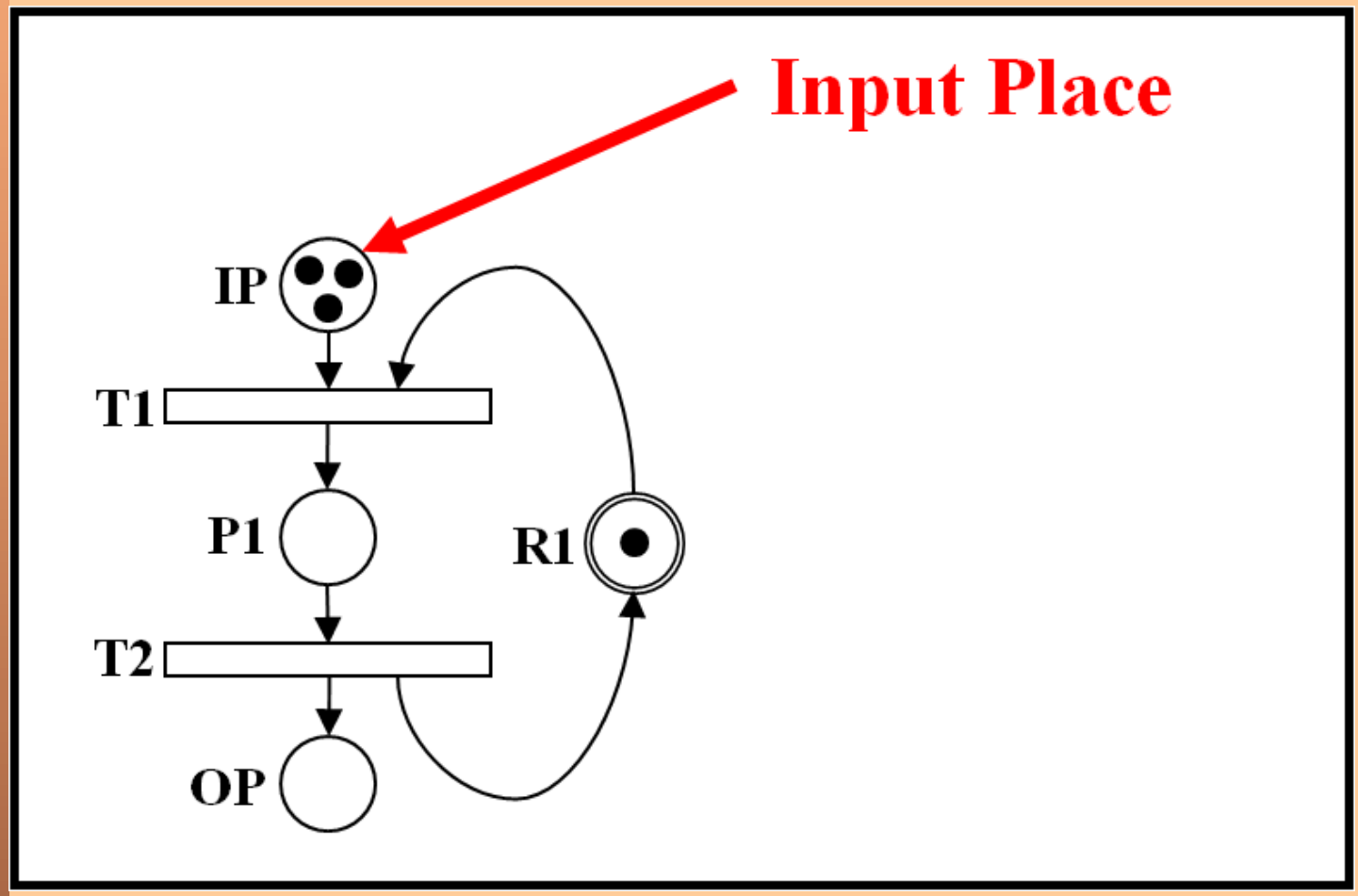

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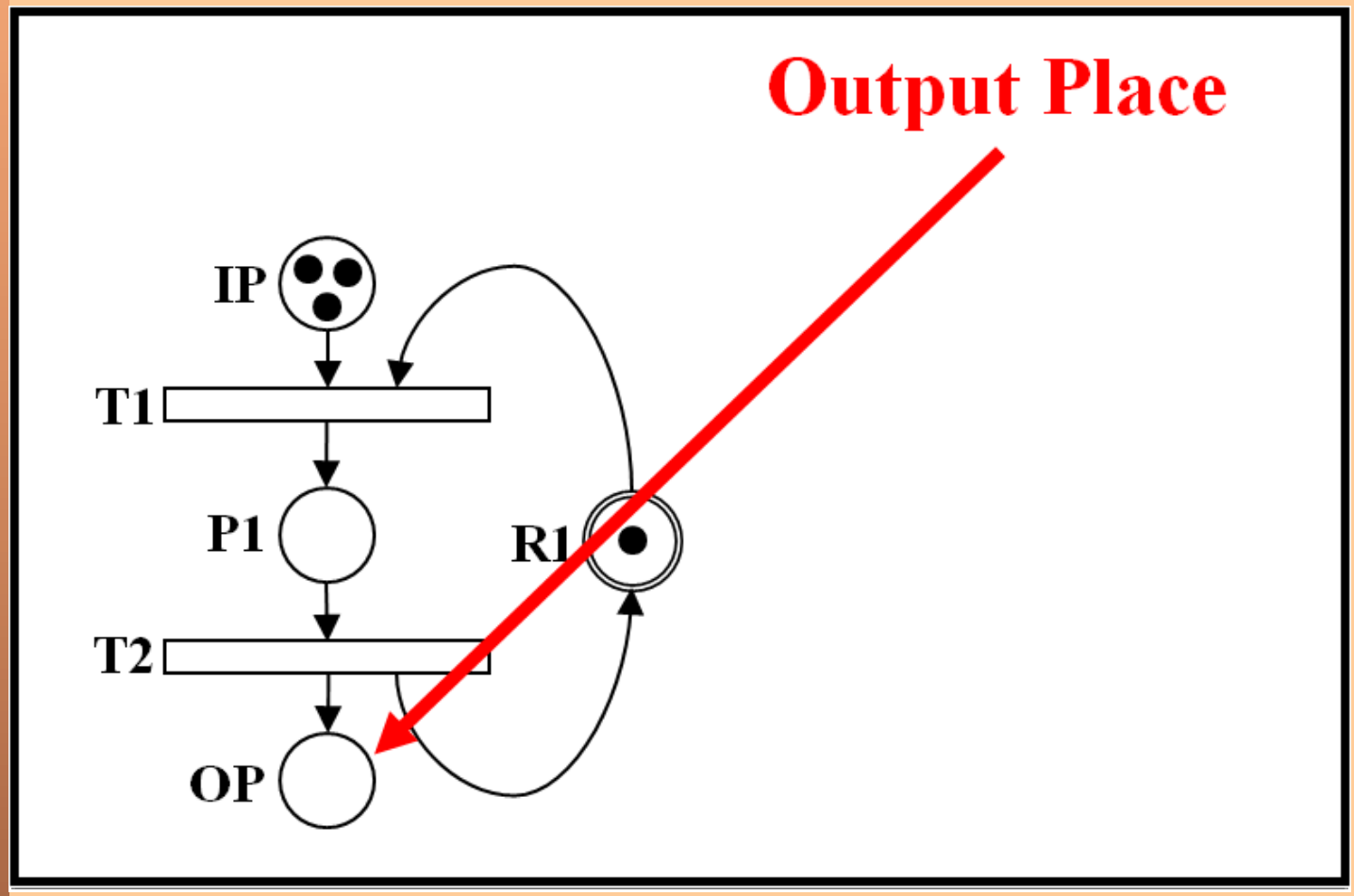

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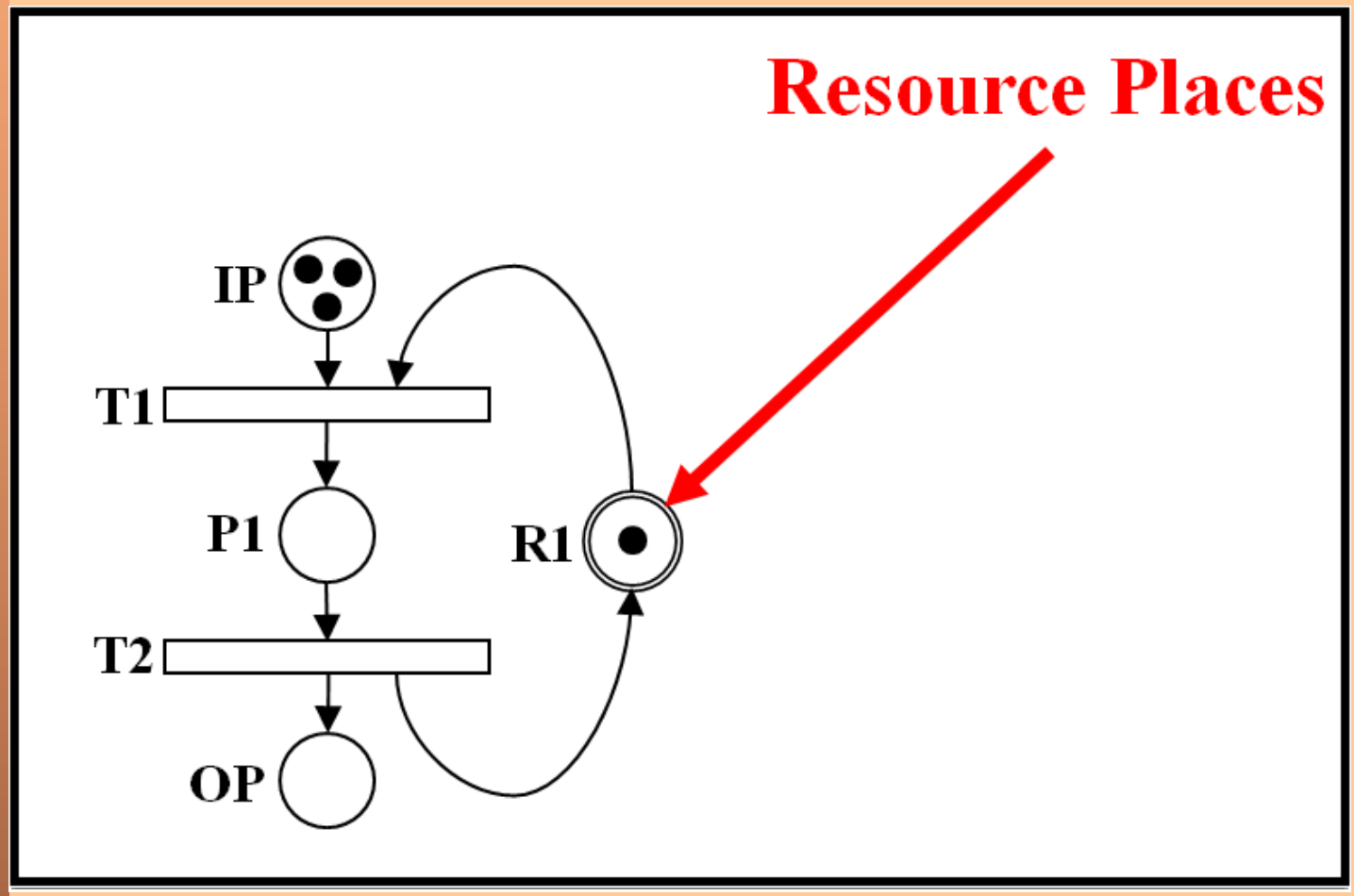

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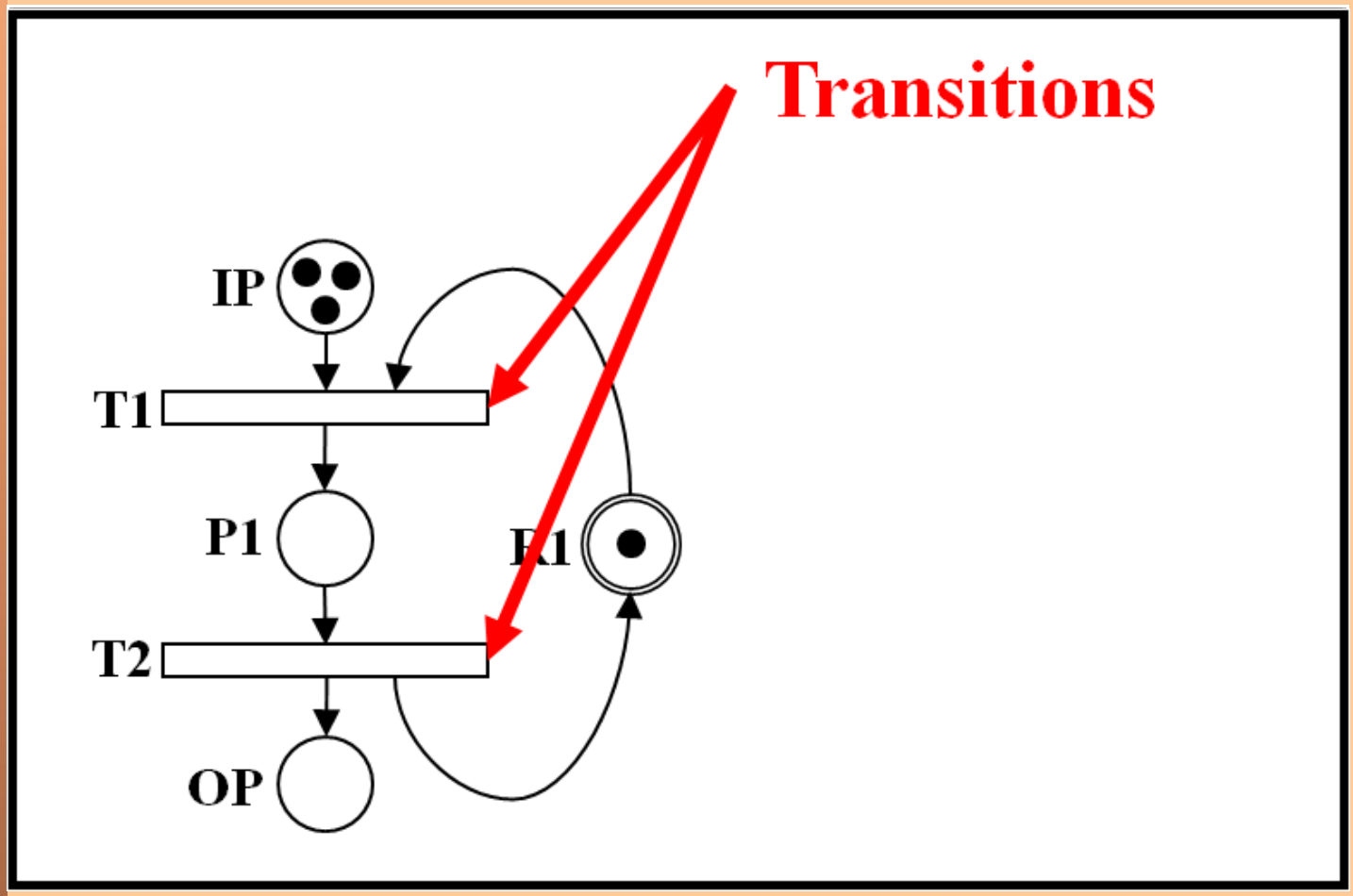

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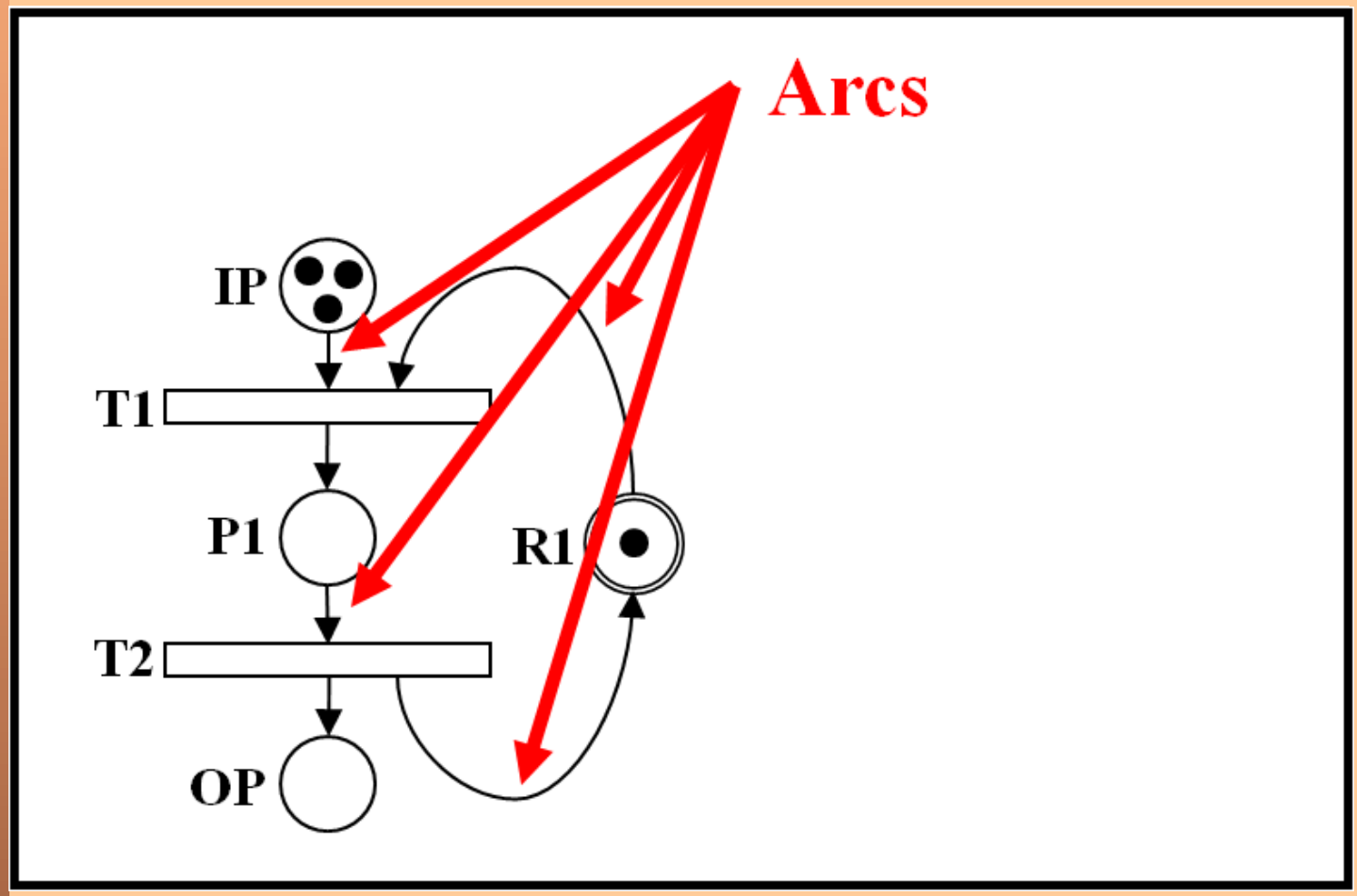

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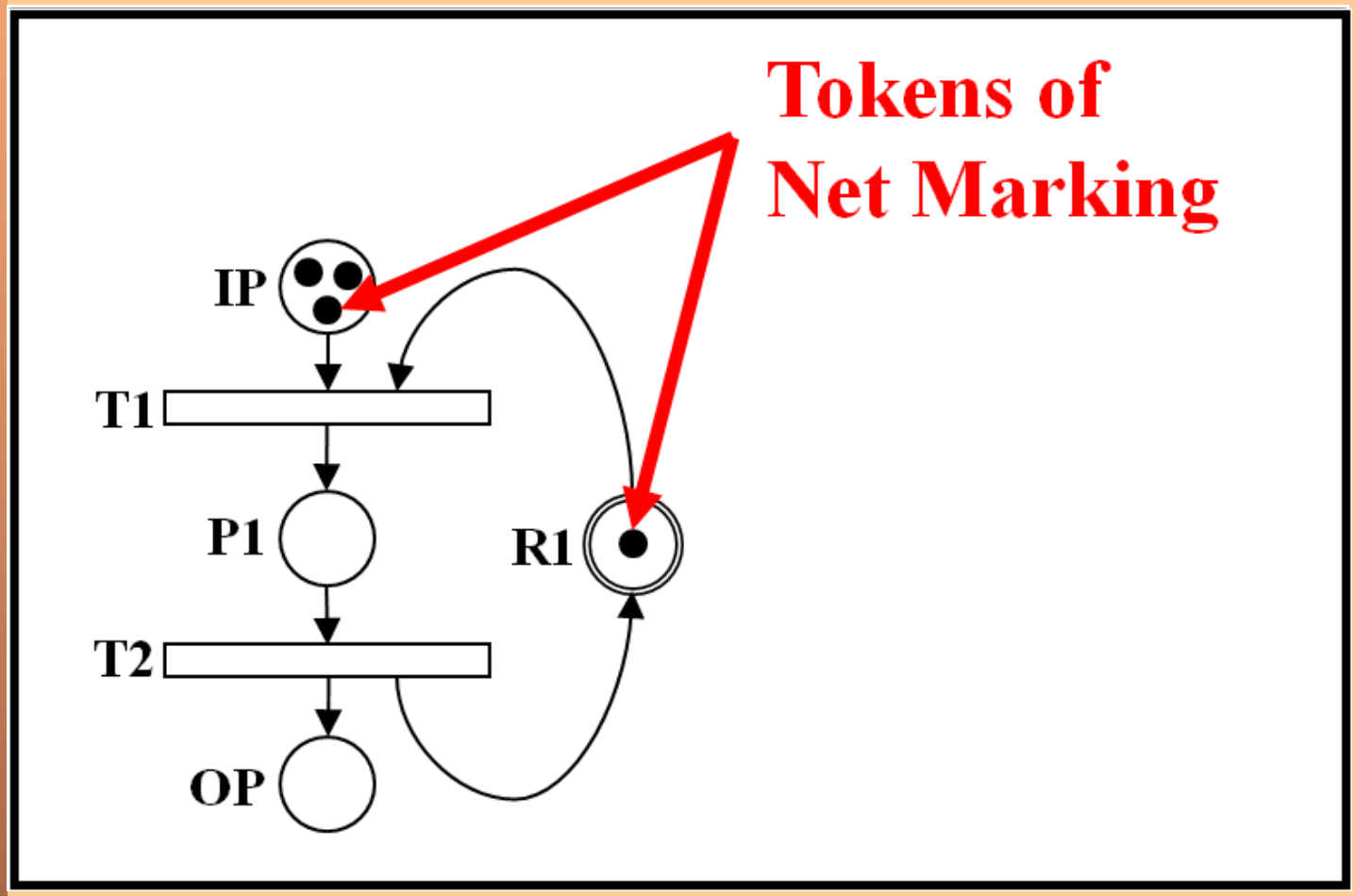
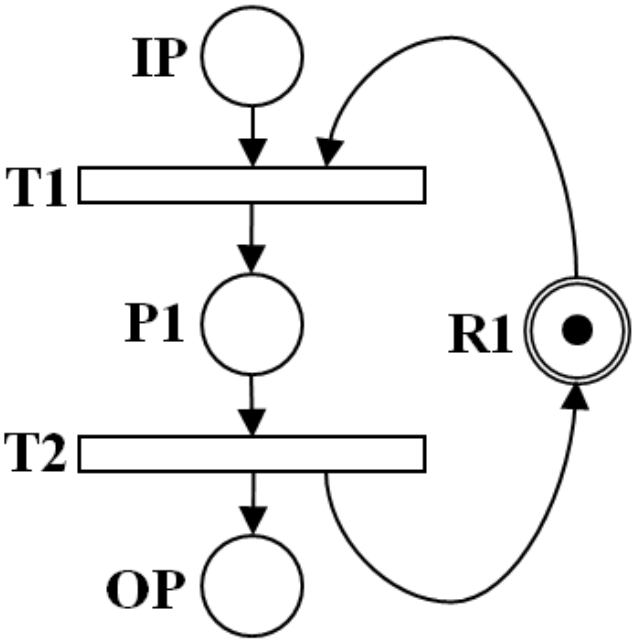


Petri Net Processes

Static Marking Of Process Net



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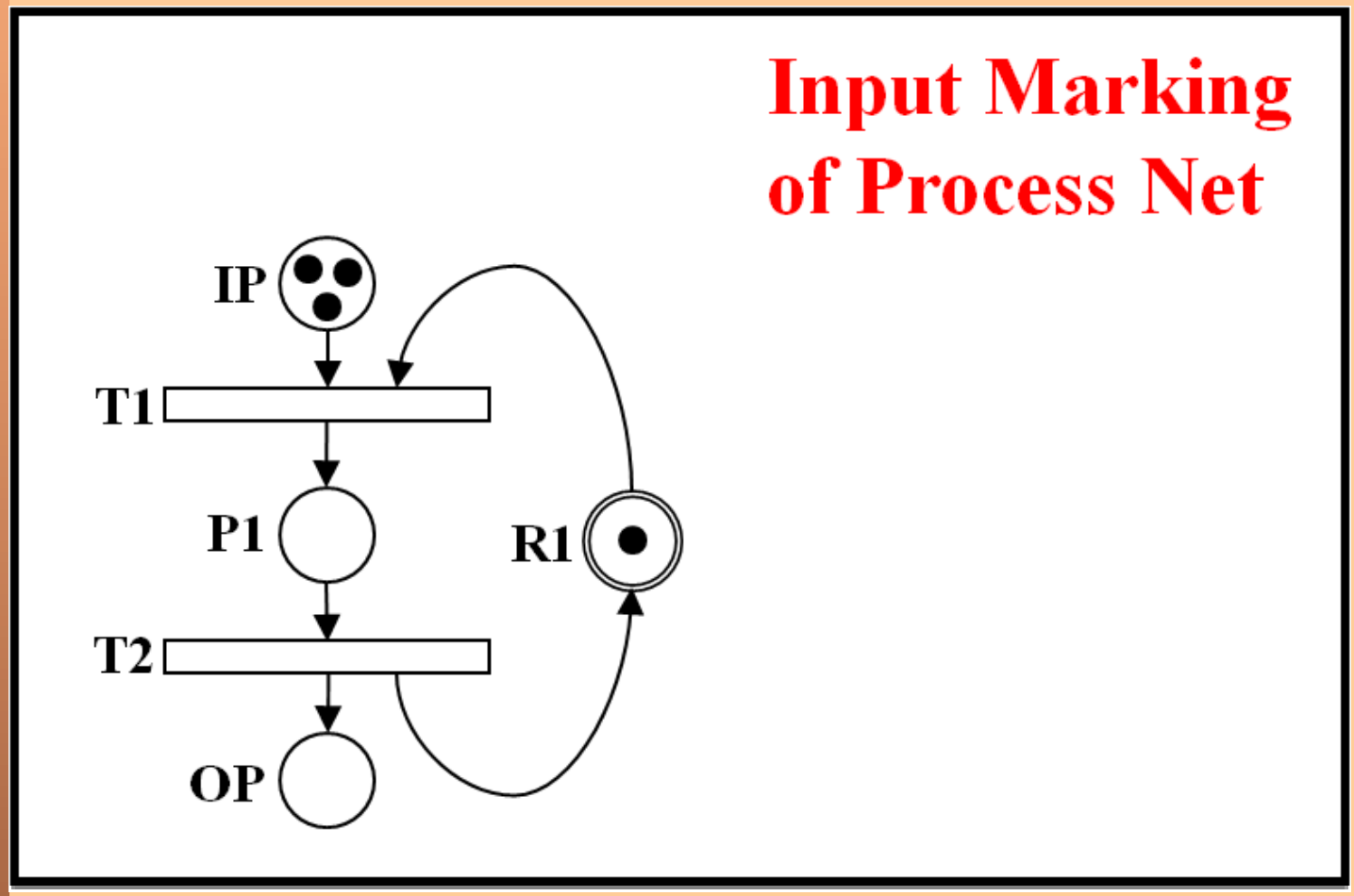

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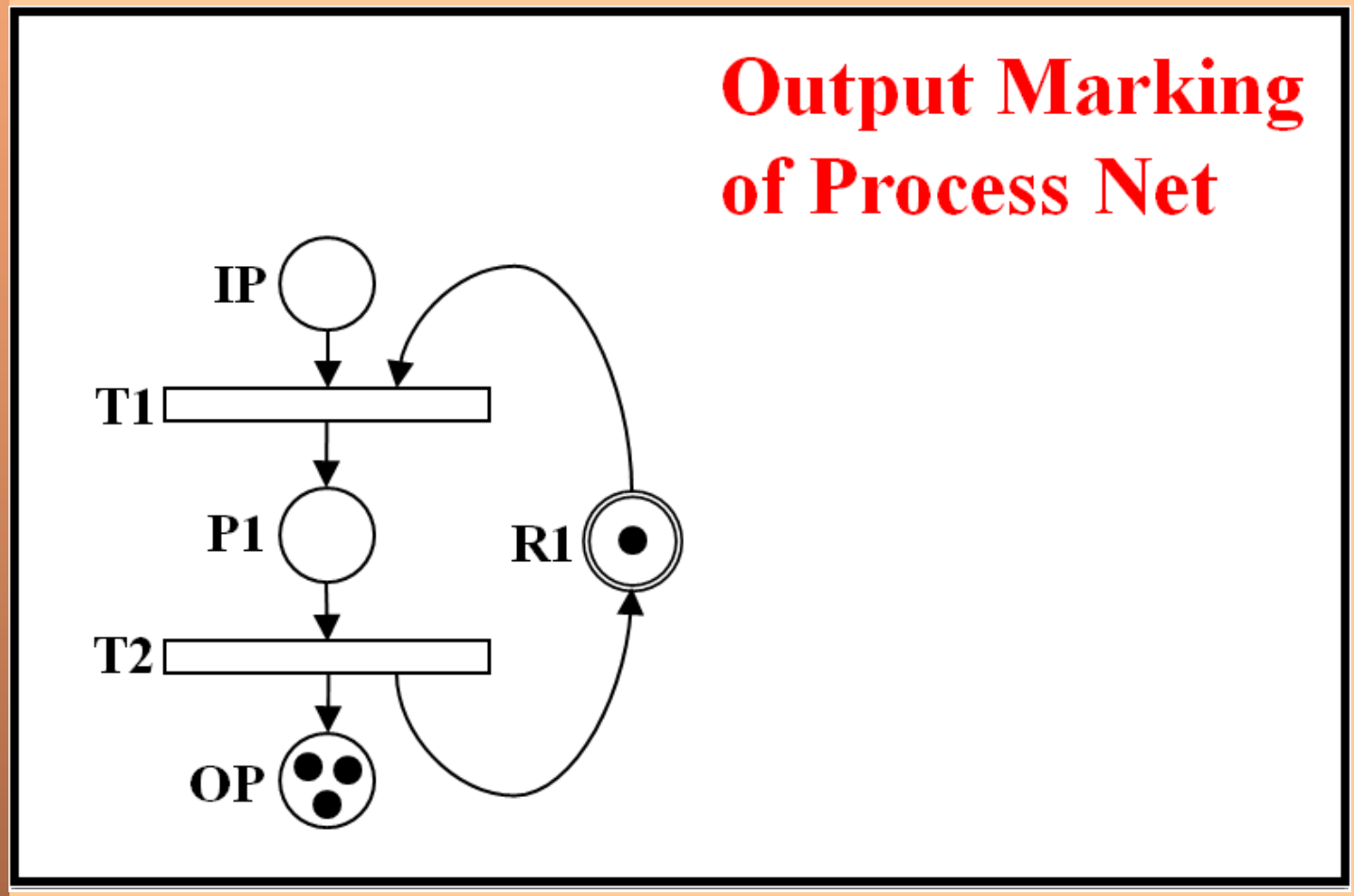

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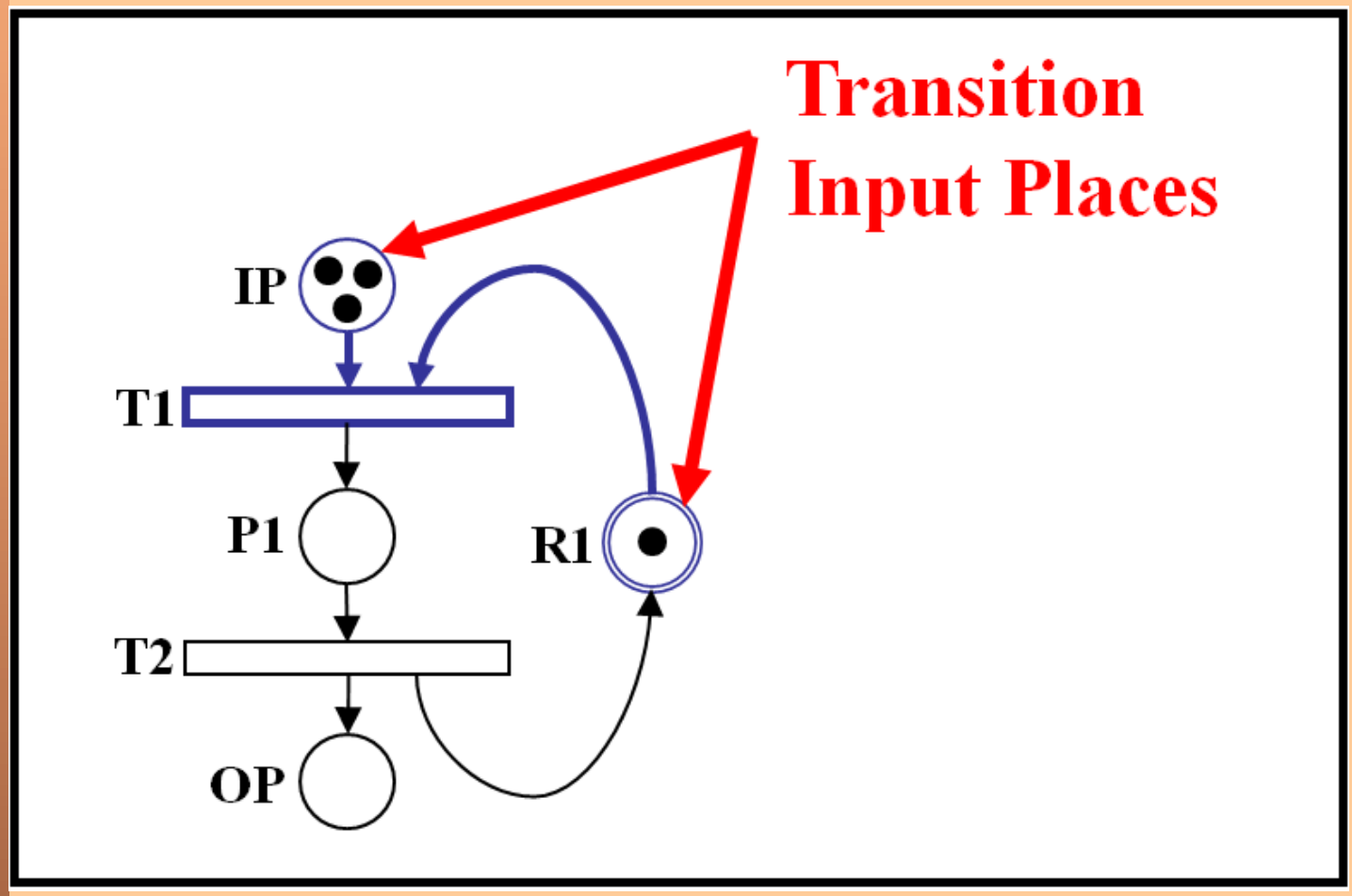

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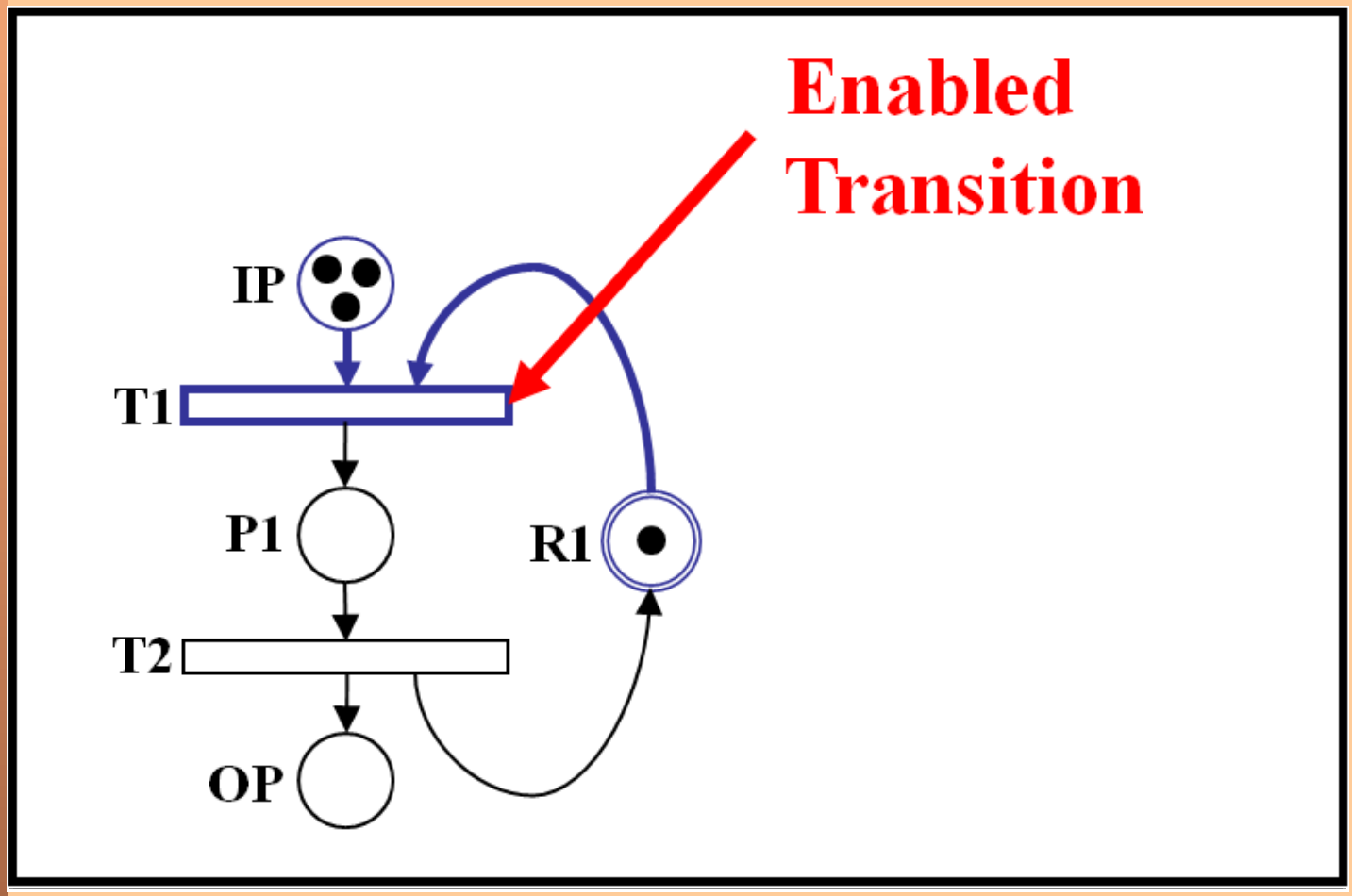

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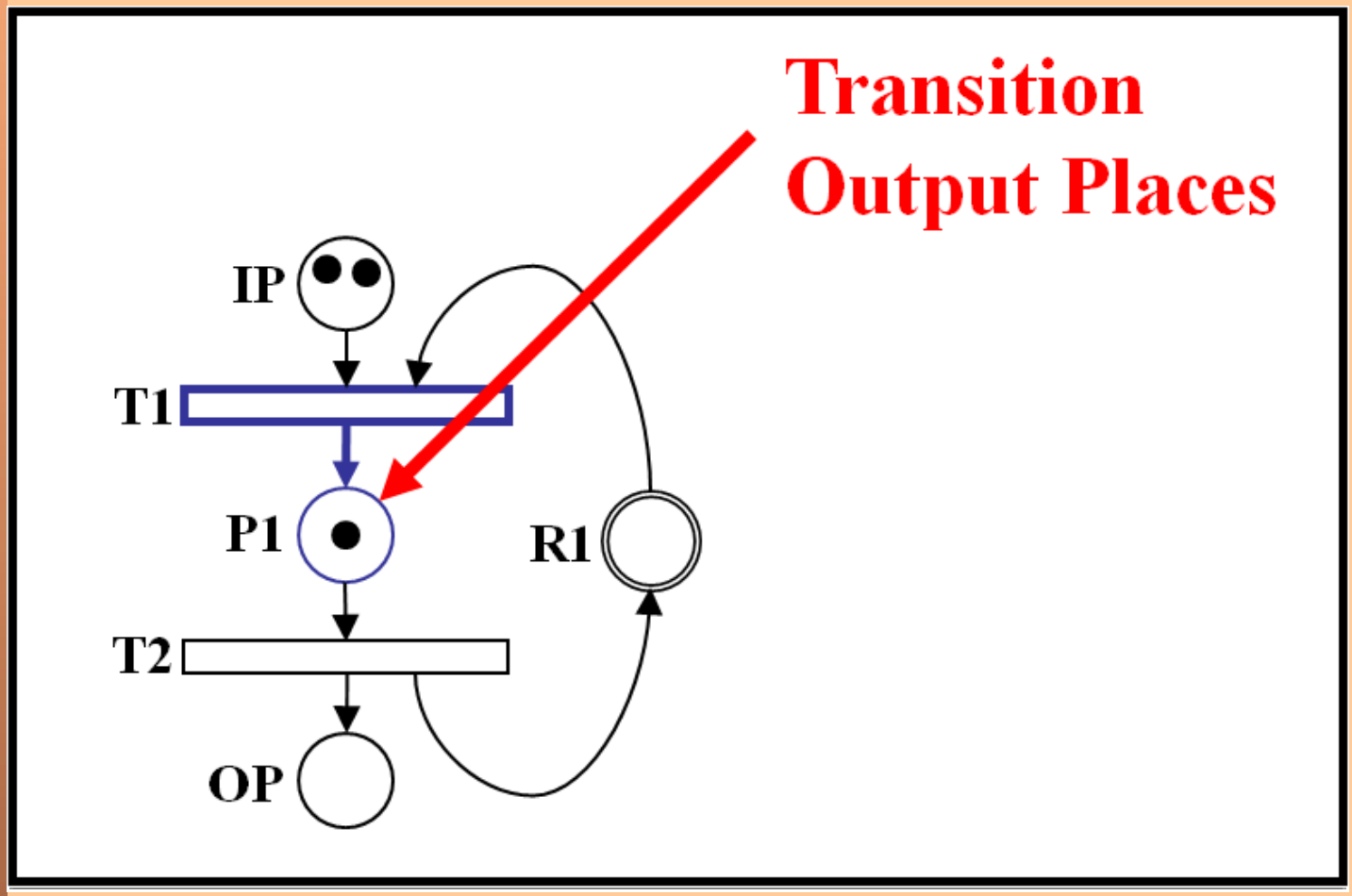


Mobile Petri Net Processes

Petri net processes

modeling and simulation tool for

- desktop platforms – Mac OS, Windows, Linux,
- mobile platforms – iOS, Android,

based on JavaFX 8 technology.

MPNP - Motivation

Mobile Petri Net Processes

project is also a

JavaFX 8 framework

proof of concept in developing

- **computational-intensive,**
- **cross-platform application.**

Mobile Petri Net Processes

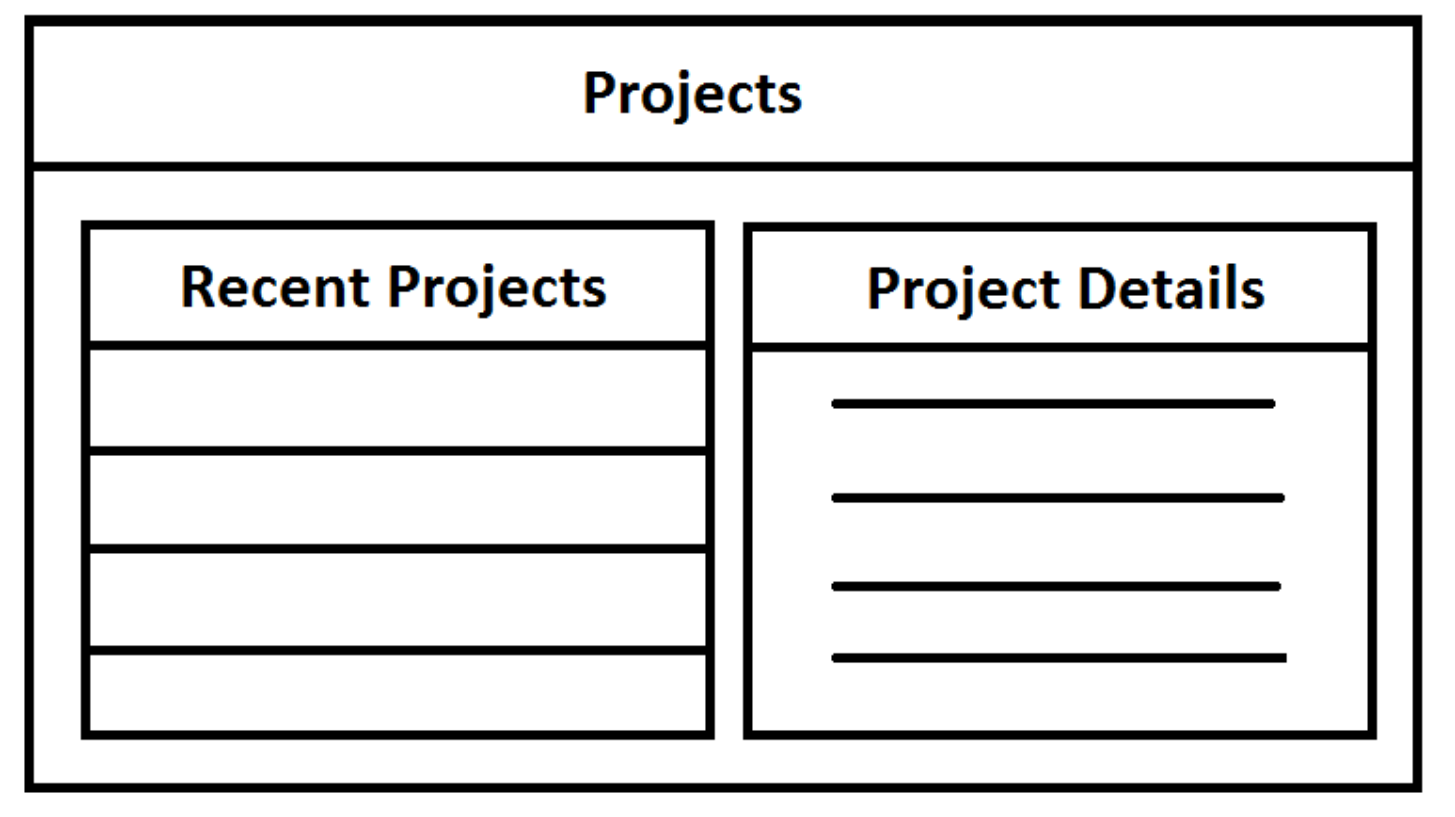
MPNP – Workflow Concept

- the main difference between the vast majority of tools lies in the **workflow concept**,
- mobile applications usually consists of **particular screens** which users navigate between.

MPNP – Project Manager

- manager of your projects,
- recent projects and their details overview,
- possibility to create new or import existing projects from filesystem or web storages like Google Disk.

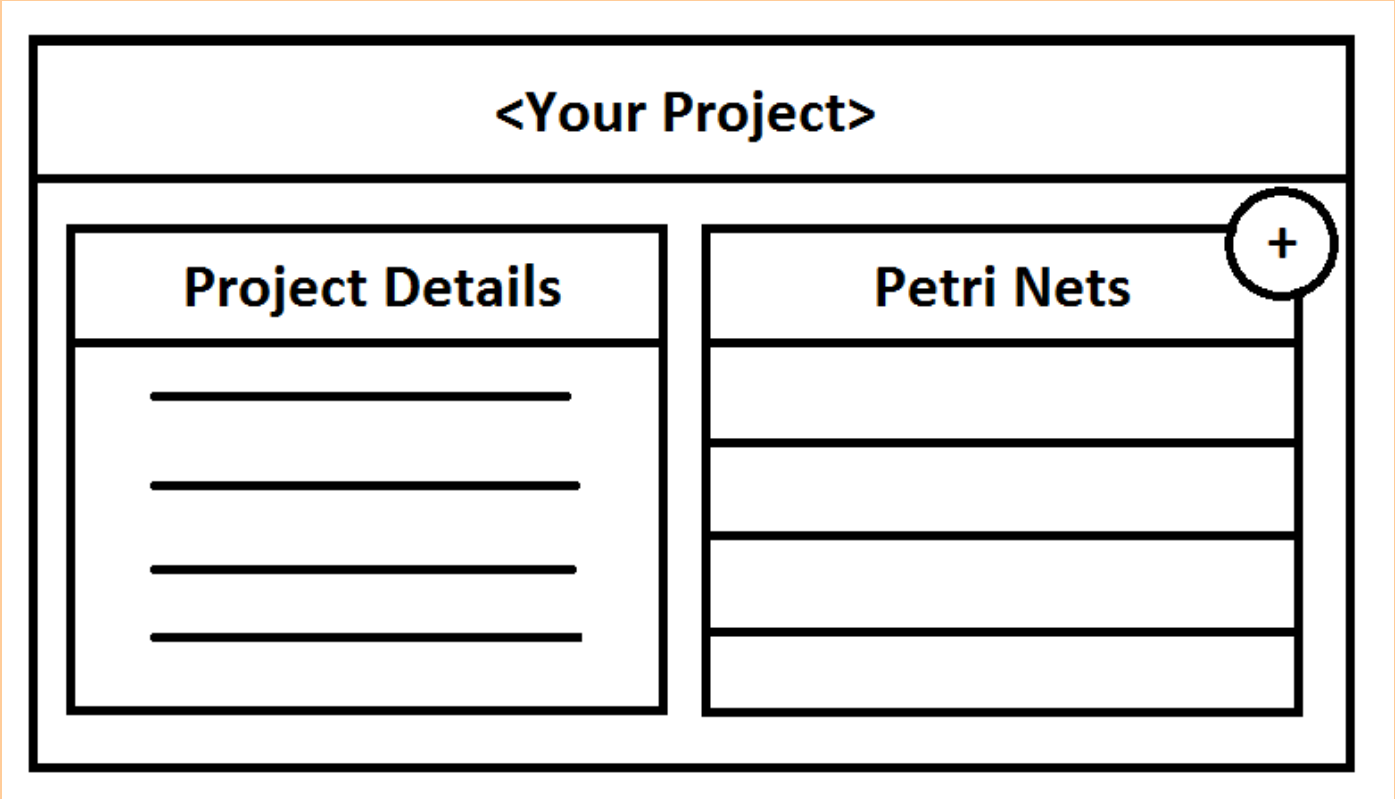
MPNP - Project Manager



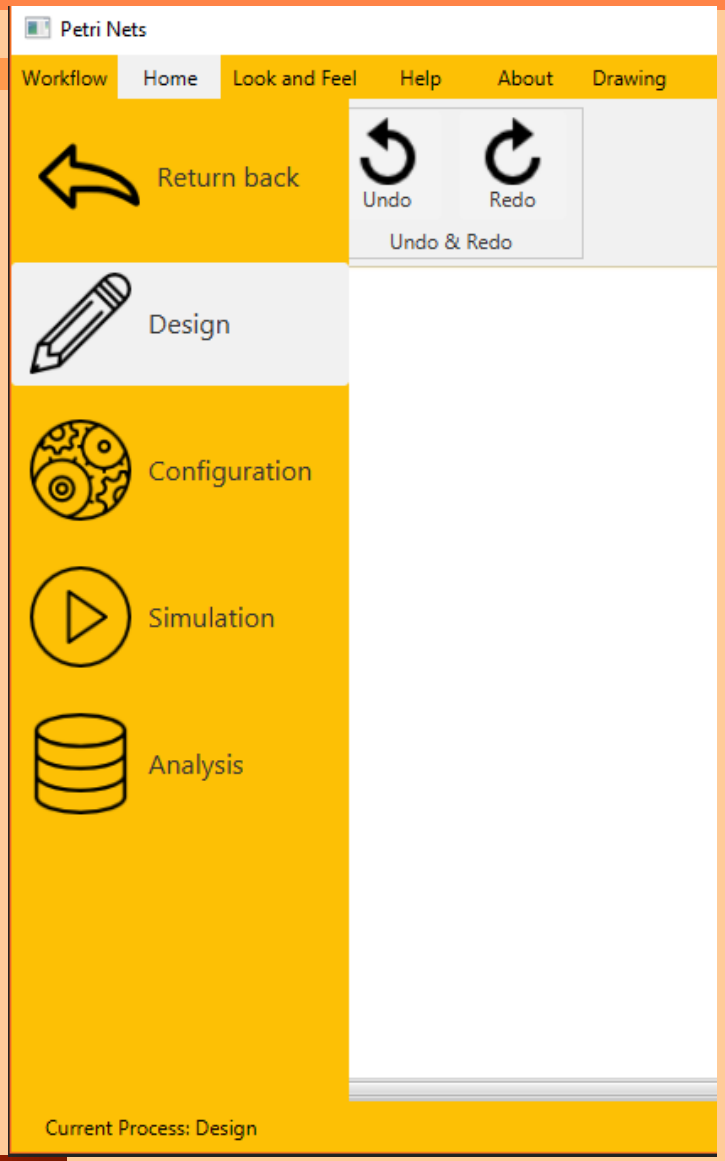
MPNP – Project Editor

- explorer of a selected project,
- provides UI for editing project details and managing Petri nets,
- enables you to open multiple nets in the frame of one project and connect them via their interfaces into one net system.

MPNP - Project Editor



MPNP - Petri Net Processes Editor



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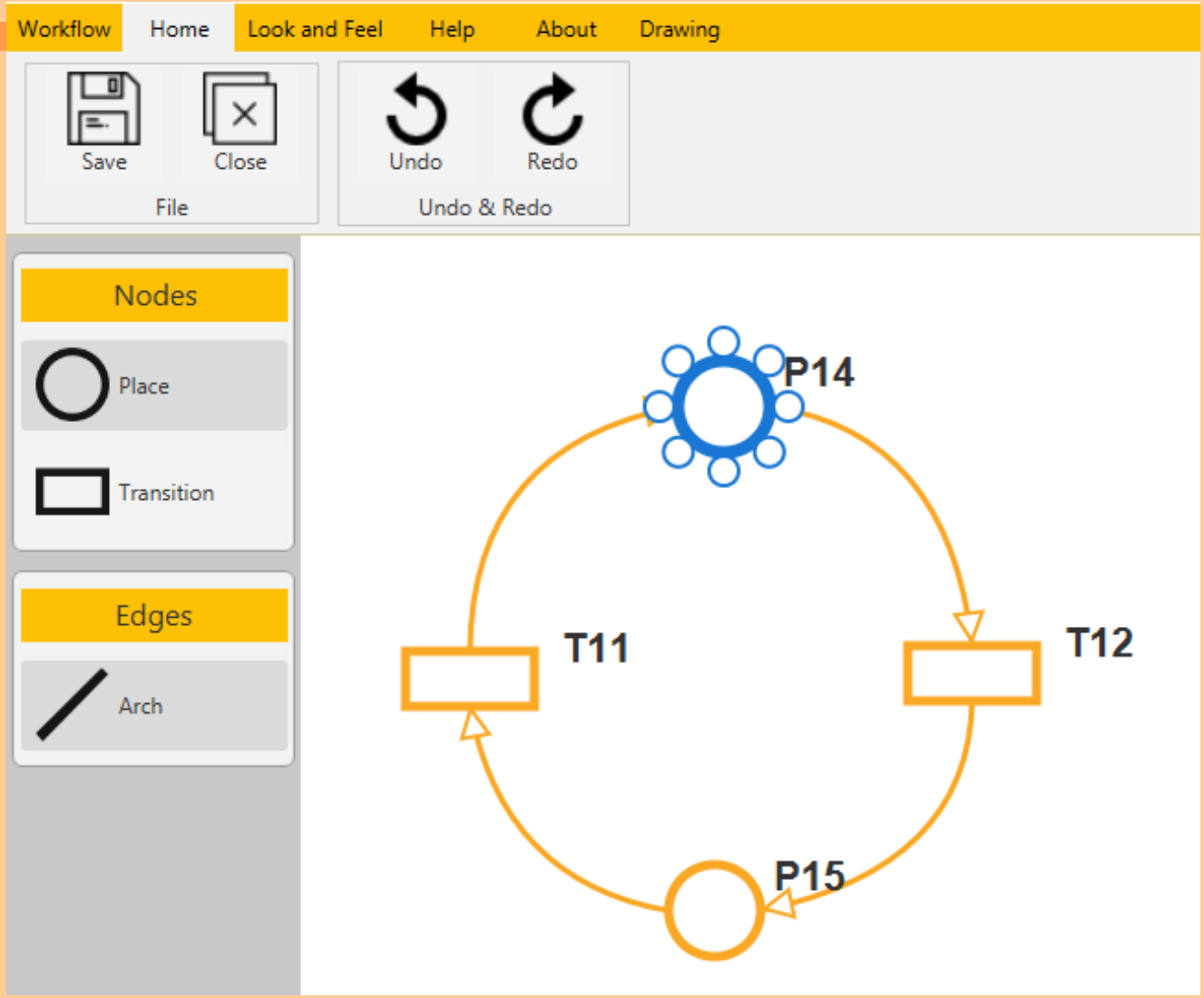
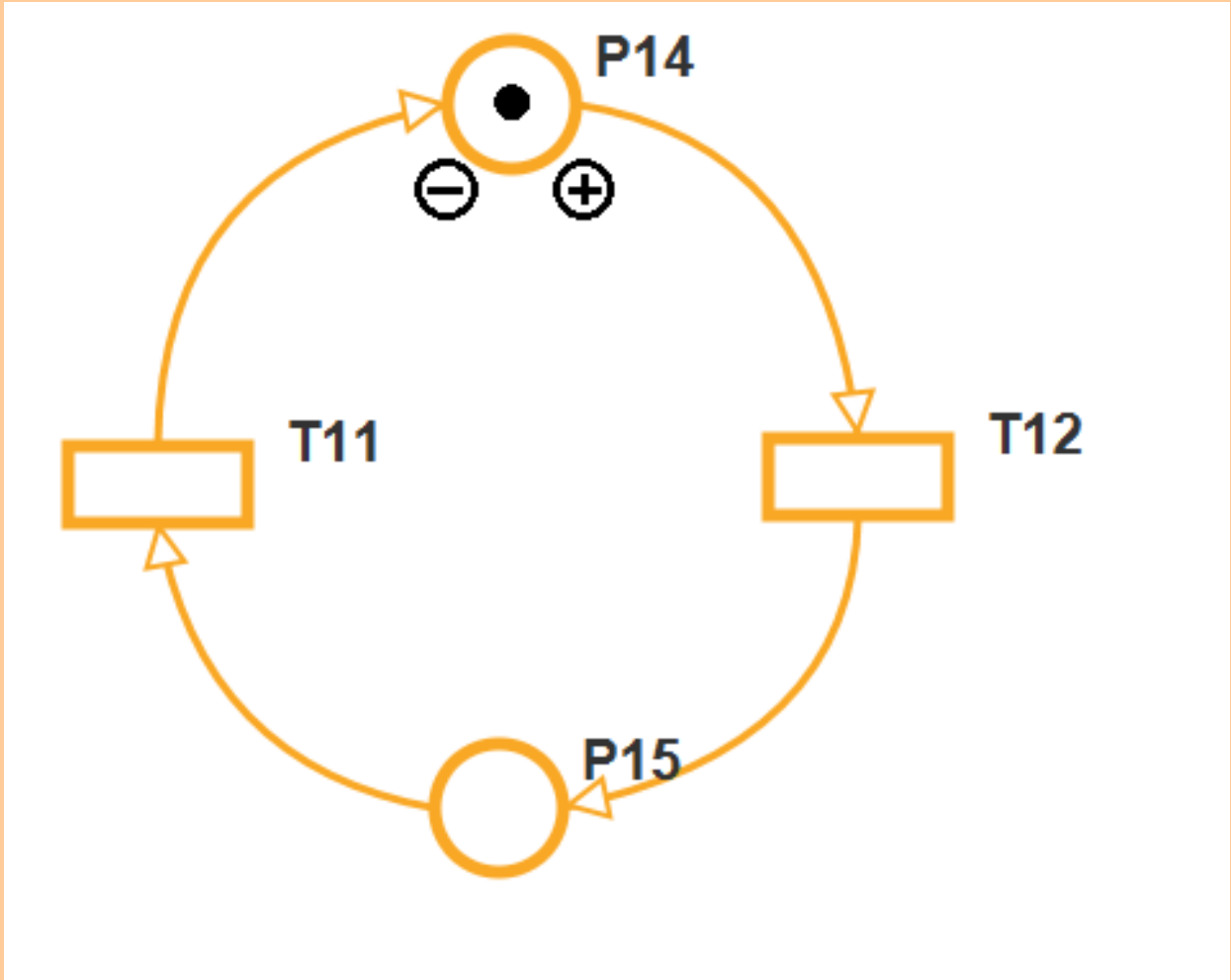


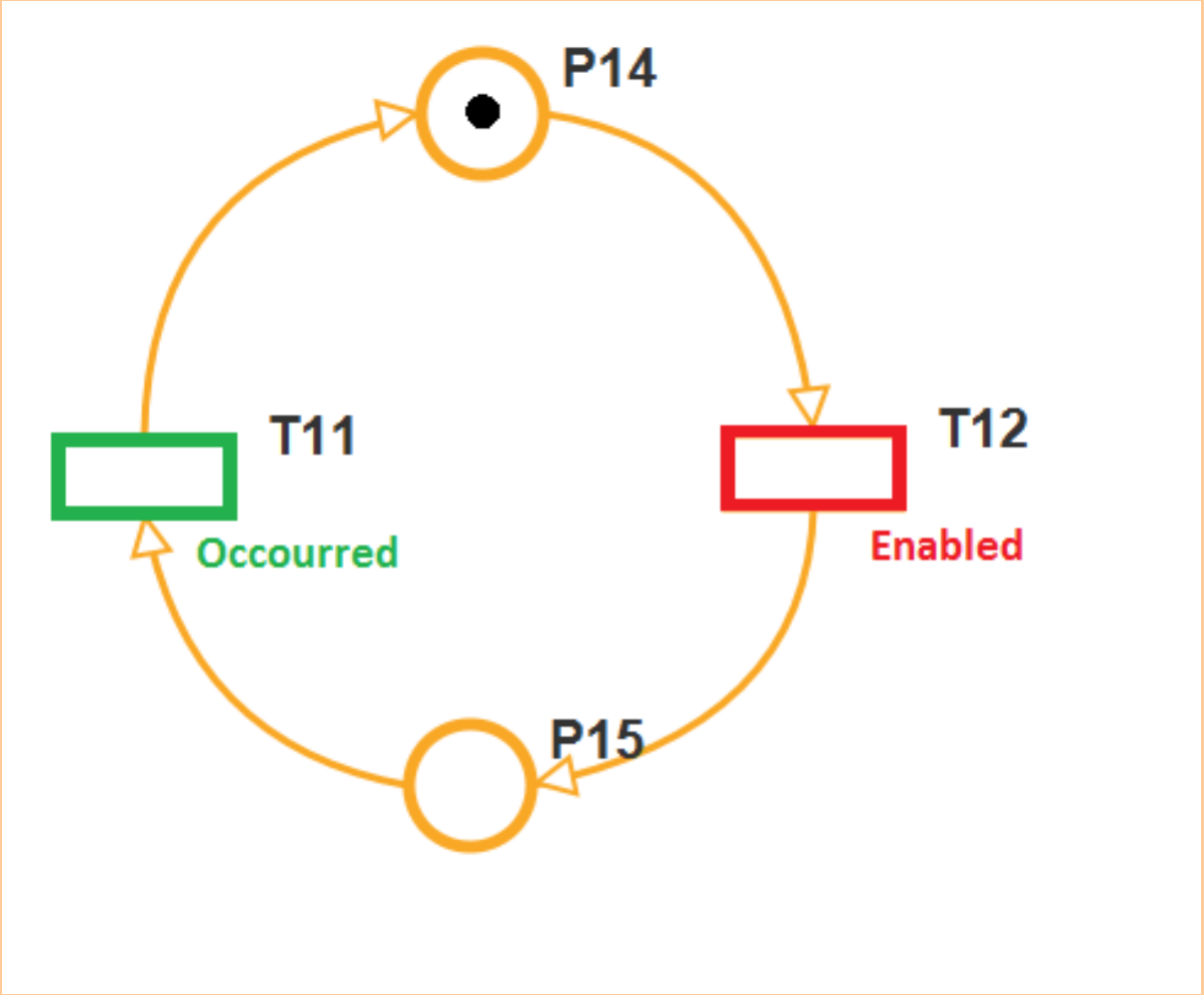
Petri Net Processes Verification

- incidence matrix,
- free-choice sectors,
- synchronization sectors,
- traps and co-traps.

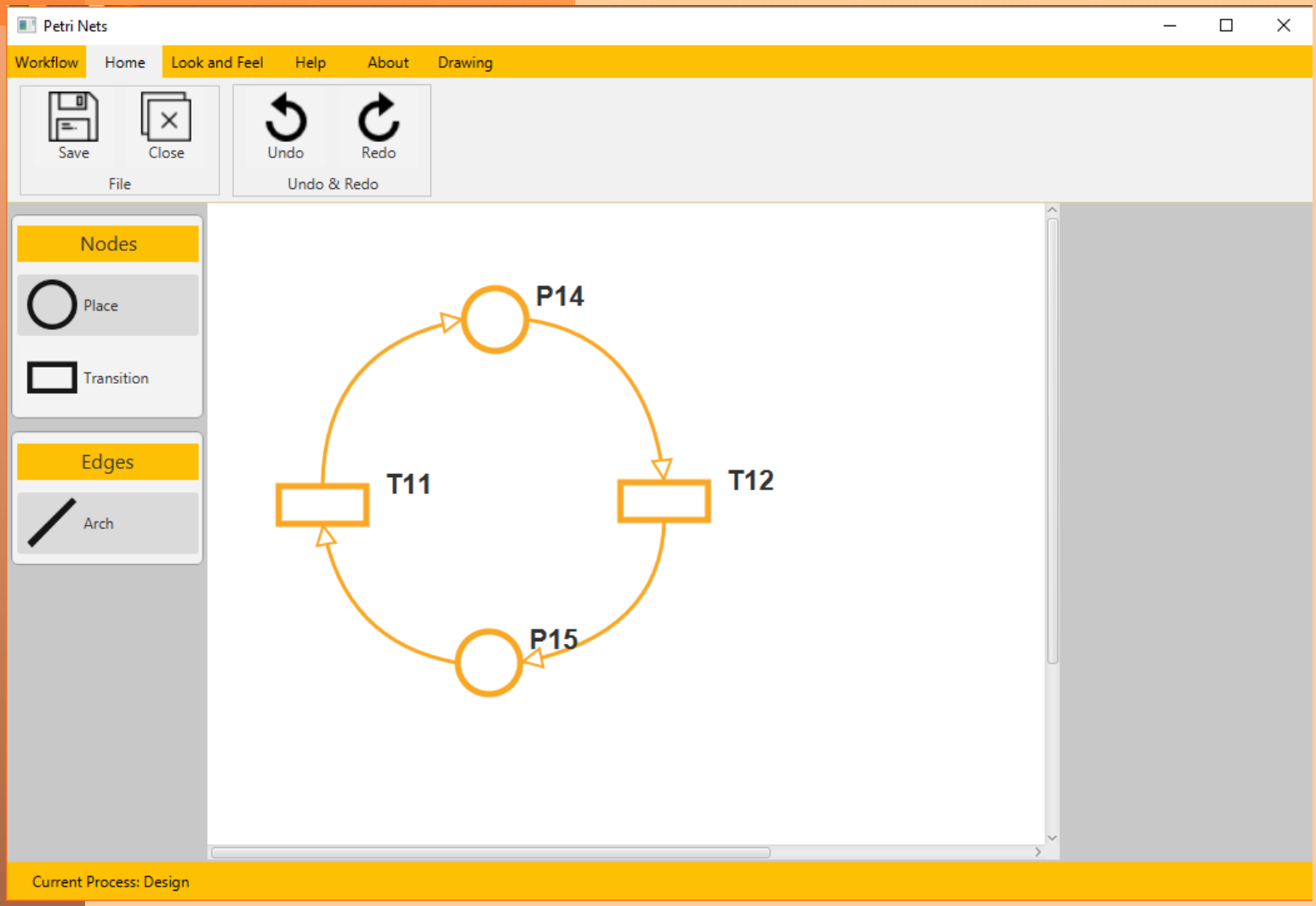
MPNP – Petri Nets Processes Configuration



MPNP – Petri Net Processes Simulation



MPNP - Desktop Version



Thank You for Your Attention

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