

Link 16 Message Processing Based on Transaction

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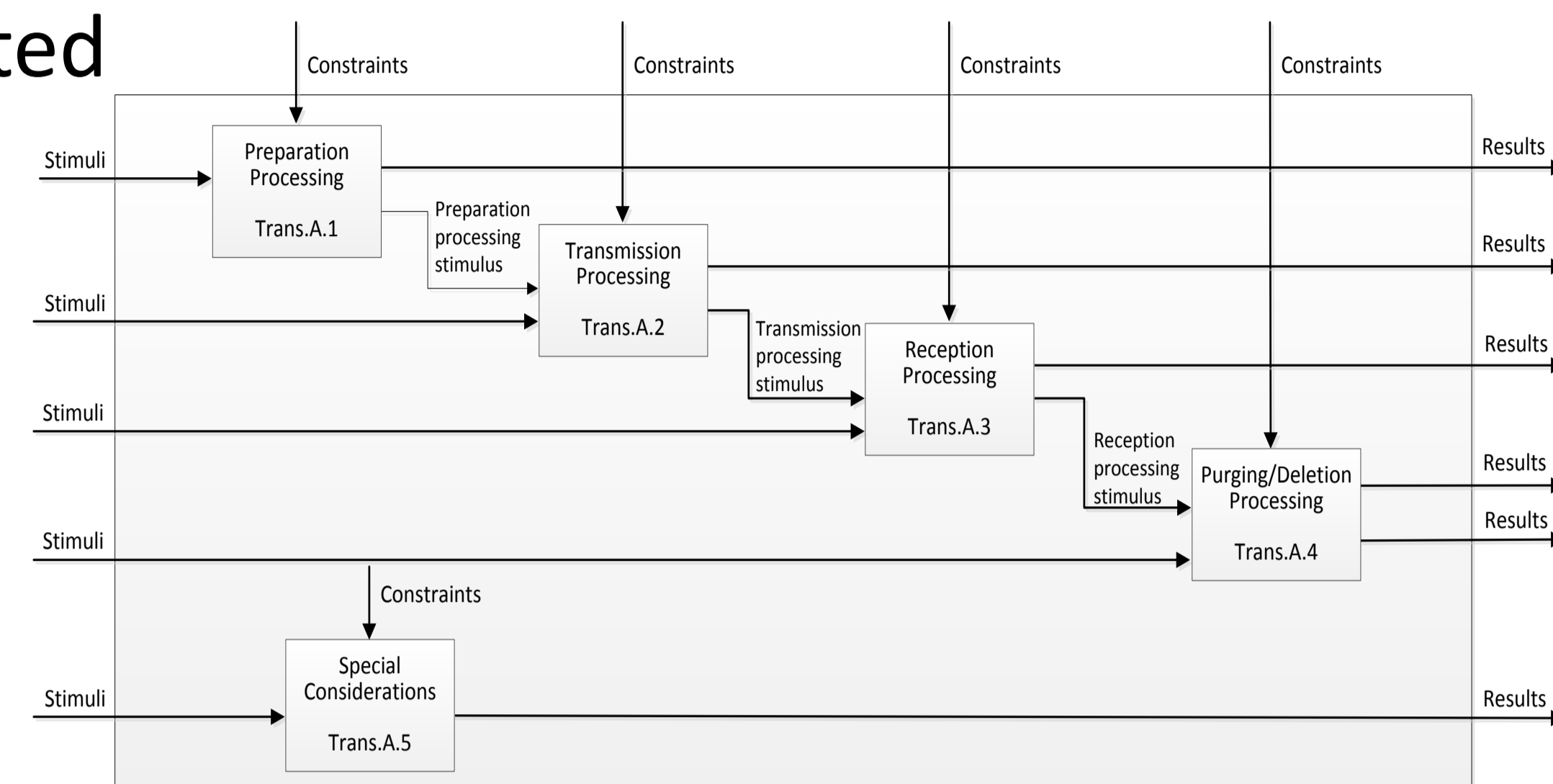
INTRODUCTION

- Data link is an information system to achieve interoperability between sensors, command and control (C2) systems and weapon platforms employed in joint tactical operations.
- Message standard is one of the most important factors of data link, which specifies tactical data format and transmission and

reception mechanisms and processing rules be implemented by data link units.

- Transaction processing:

- Preparation
- Transmission
- Reception
- Purging/deletion
- Special considerations



MESSAGE PROCESSING MECHANISM

- Implementation steps

Step 1: Determine data element requirements.

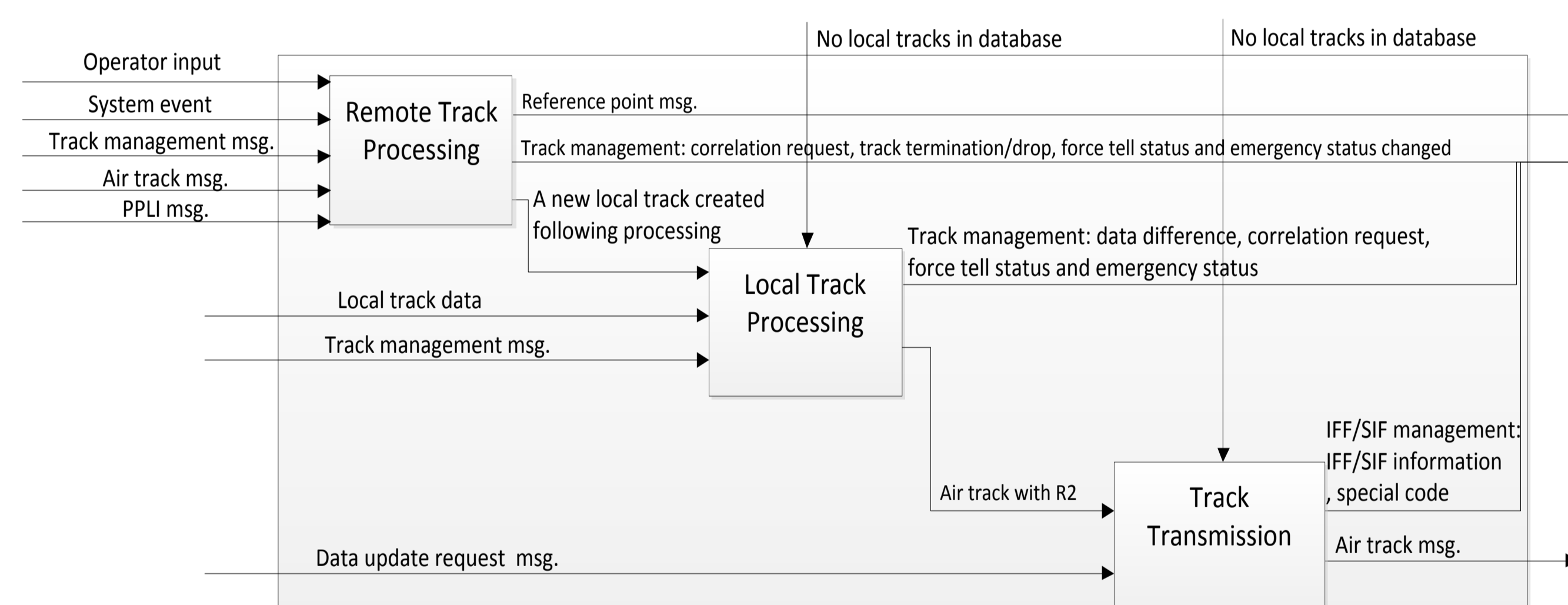
Step 2: Determine message requirements.

Step 3: Determine transaction requirements.

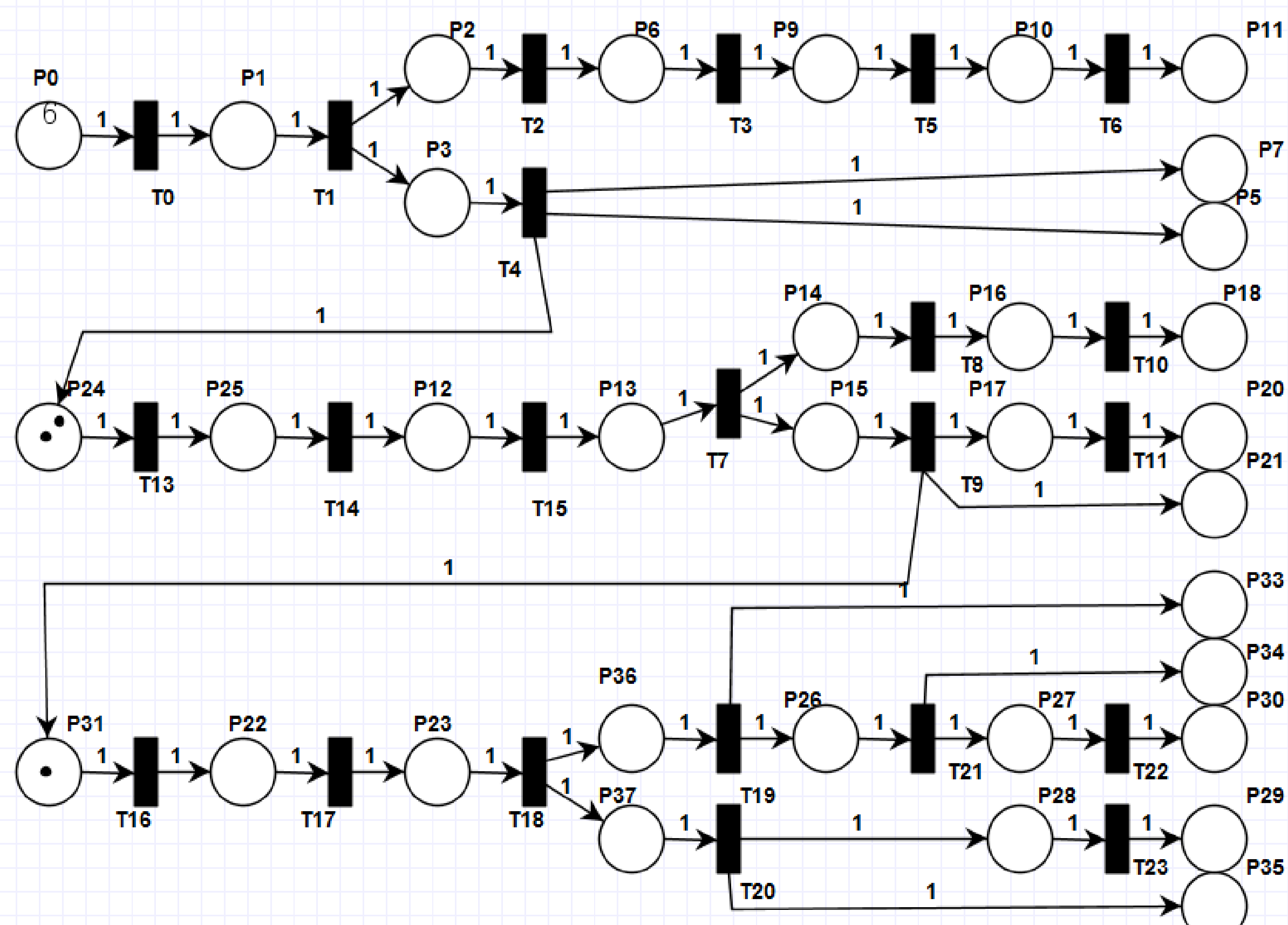
Step 4: Determine transaction package requirements.

Step 5: Design implementation process.

- Air Track Processing



MODELING AND SIMULATION



CONCLUSION

The proposed method is able to ensure the consistency of the message processing and reduce the interoperability problems among different platforms.

FUTURE WORK

Modeling more functions in Link 16 and improving the automation of message processing.