



Global E2ECU

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LHC OPN meeting

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Connect. Communicate. Collaborate

Problem statement

- The E2ECU function provided by GEANT2 NOC operates from 06:00 to 22:00
- This is OK for European T1 sites as very few (none ?) NREN operates 24x7
- 8 hours a day where North American and Asian T1 centres cannot avail of the E2ECU functions
- How to ensure ***round-the clock, global***, availability of E2ECU functions ?

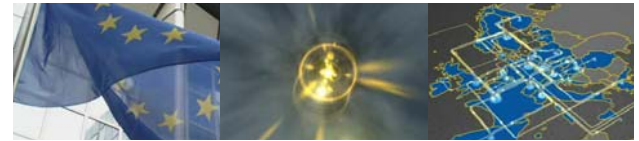


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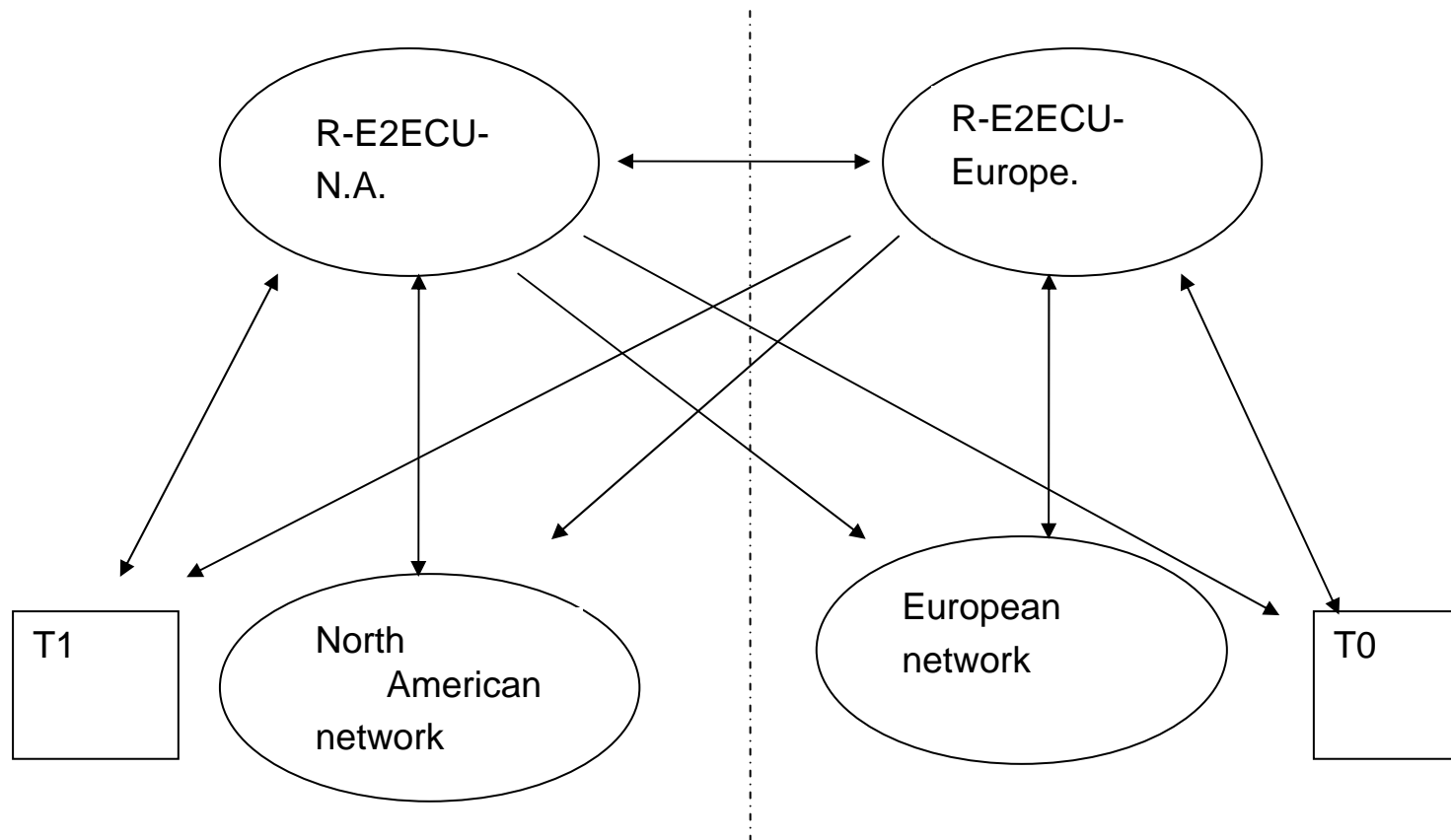
Here's an idea

- Establish *regional E2ECUs* (R-E2ECU) and establish communication/coordination procedures amongst them
- Each regional E2ECU owns fault resolution within corresponding region and co-ordinates with other regions

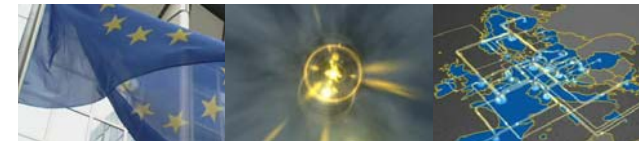
Communication between R-E2ECUs



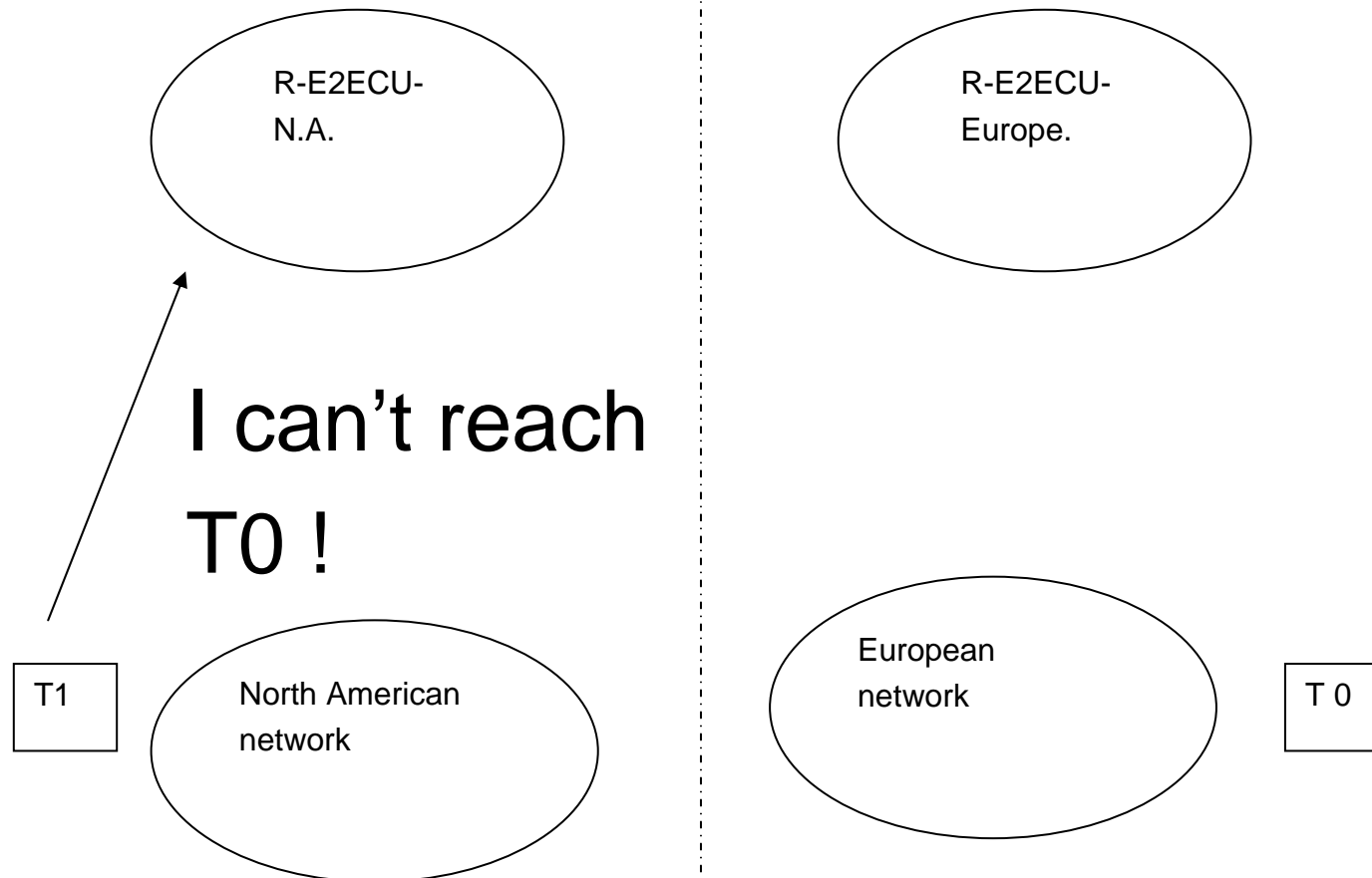
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Sample Use case : T1 notices fault to T0, step 1



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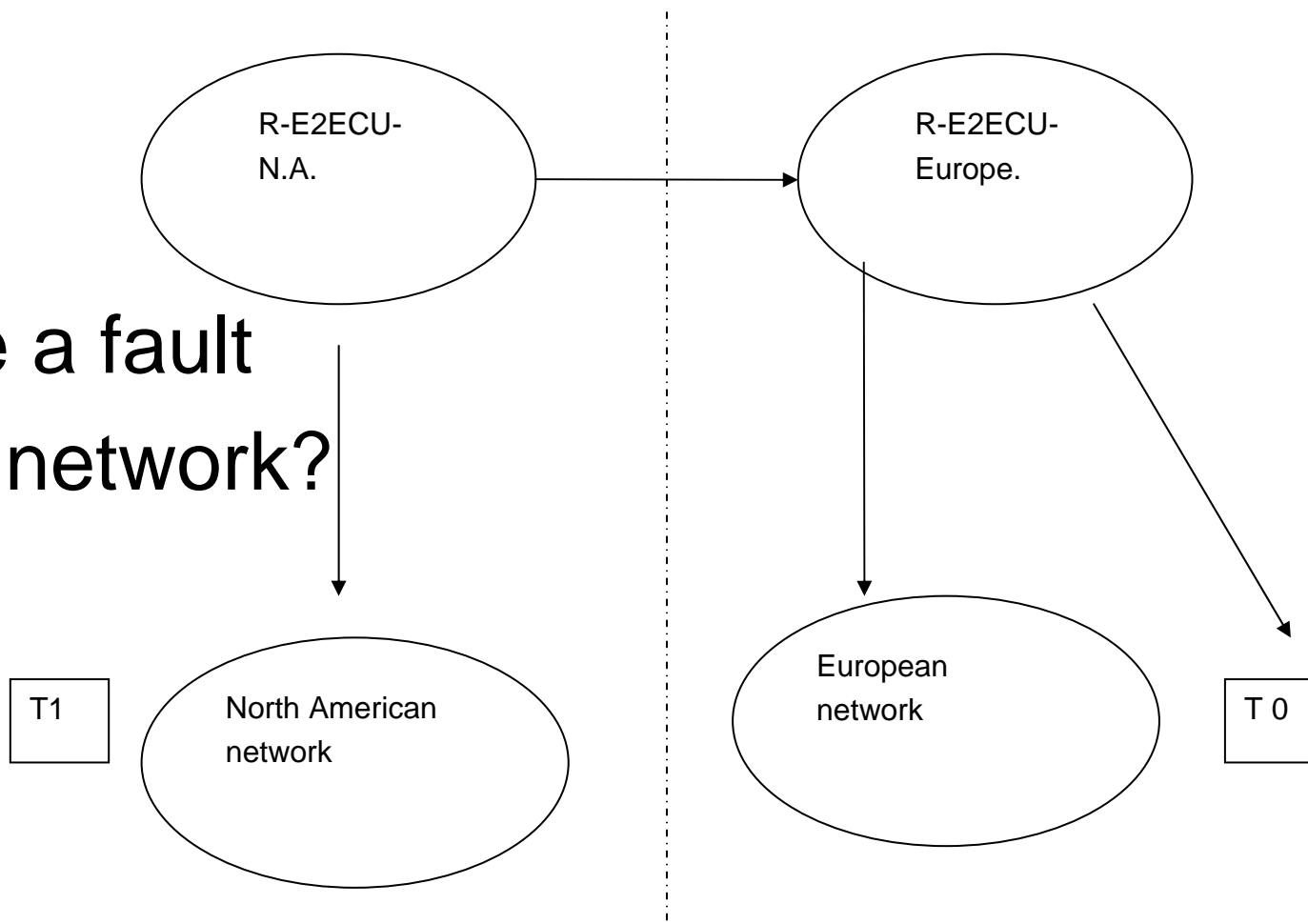


Sample Use case : T1 notices fault to T0, step 2

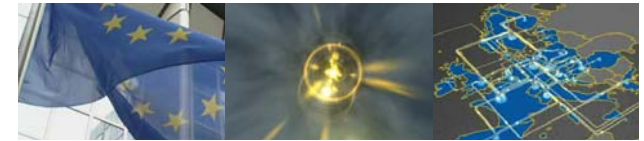


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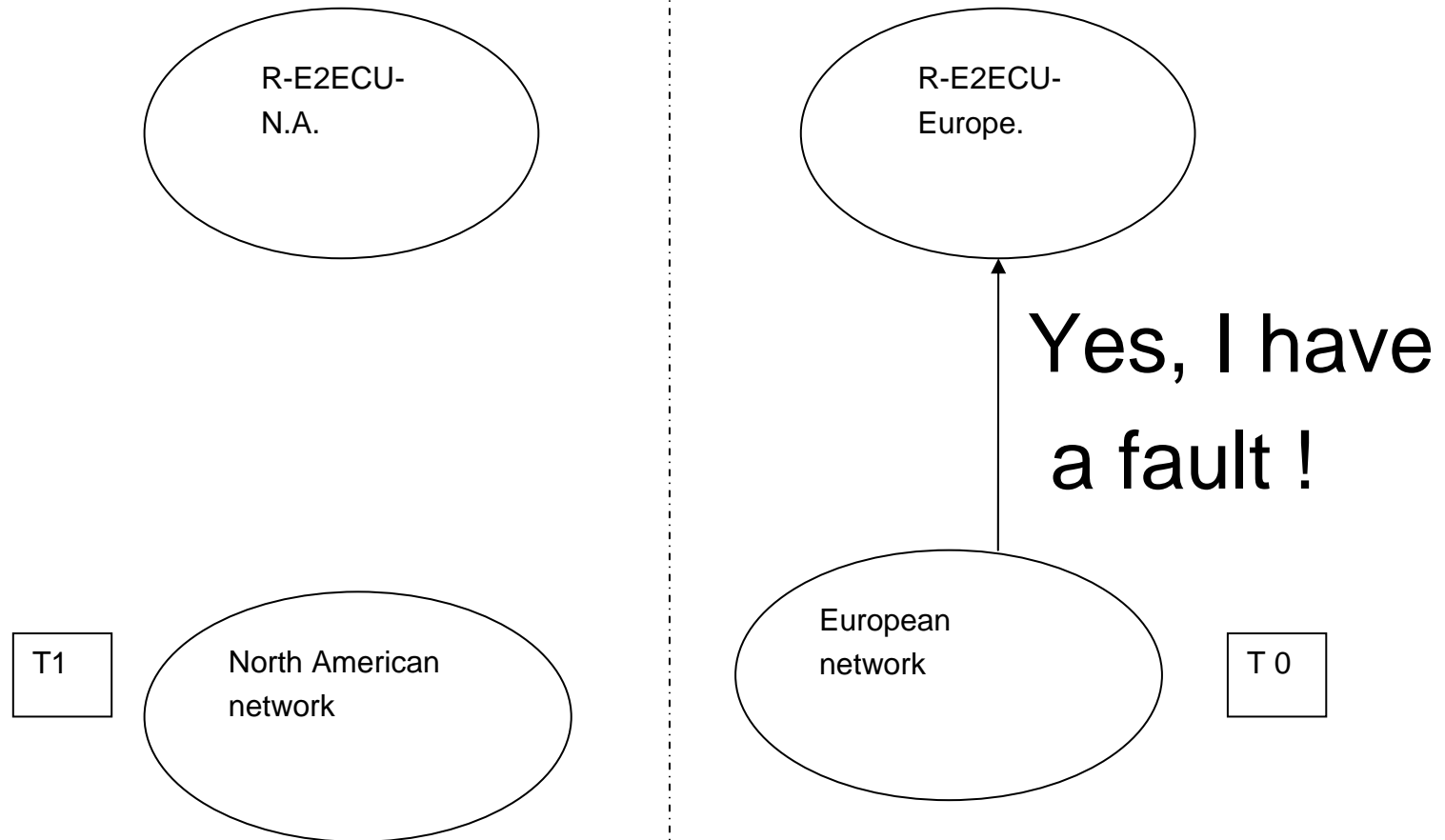
Is there a fault
in your network?



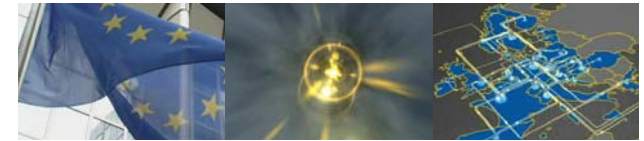
Sample Use case : T1 notices fault to T0, step 3



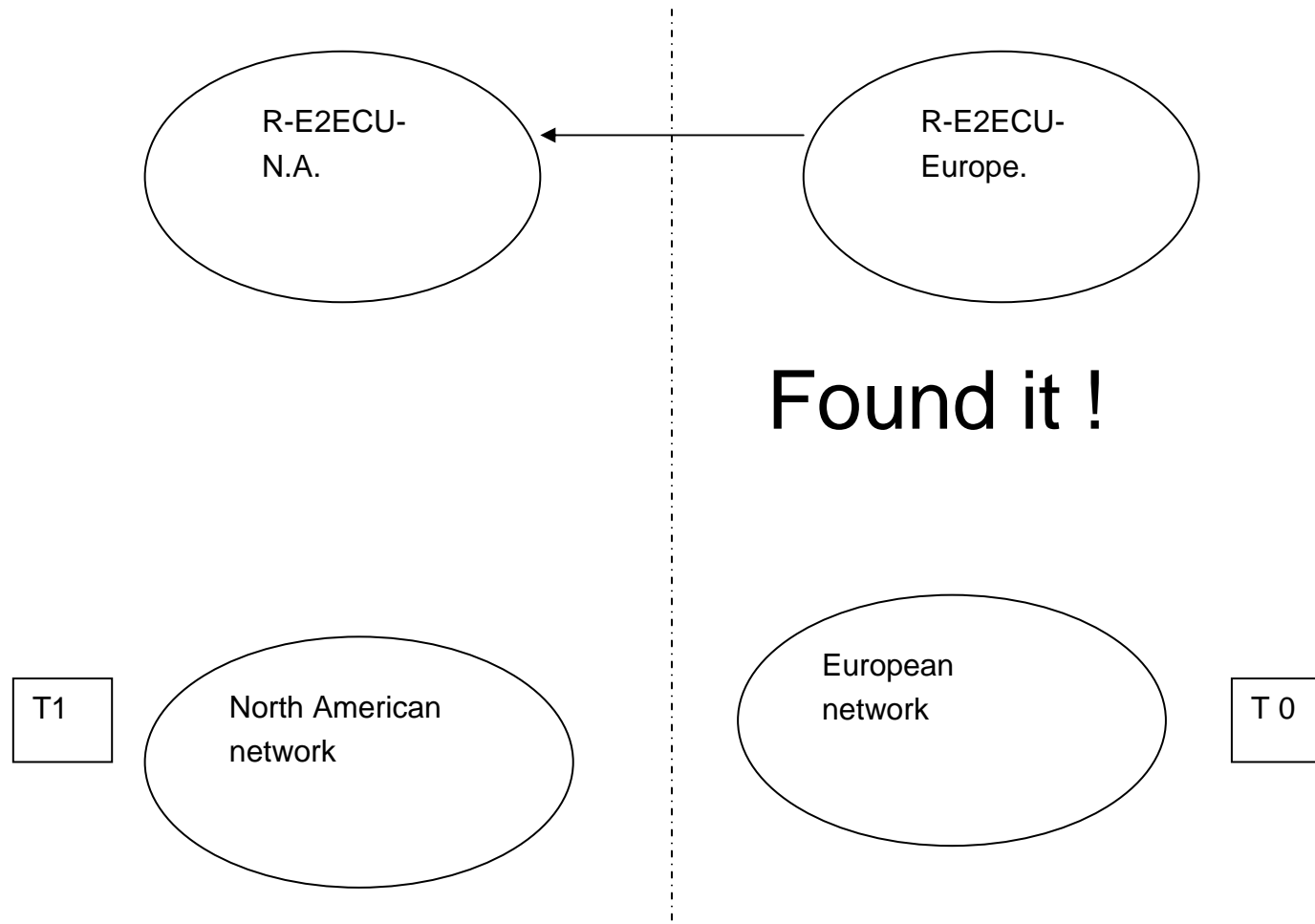
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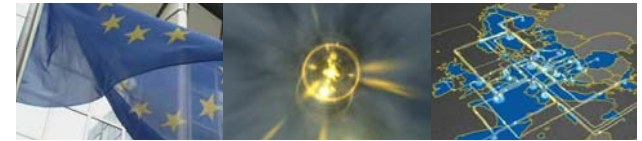
Sample Use case : T1 notices fault to T0, step 4



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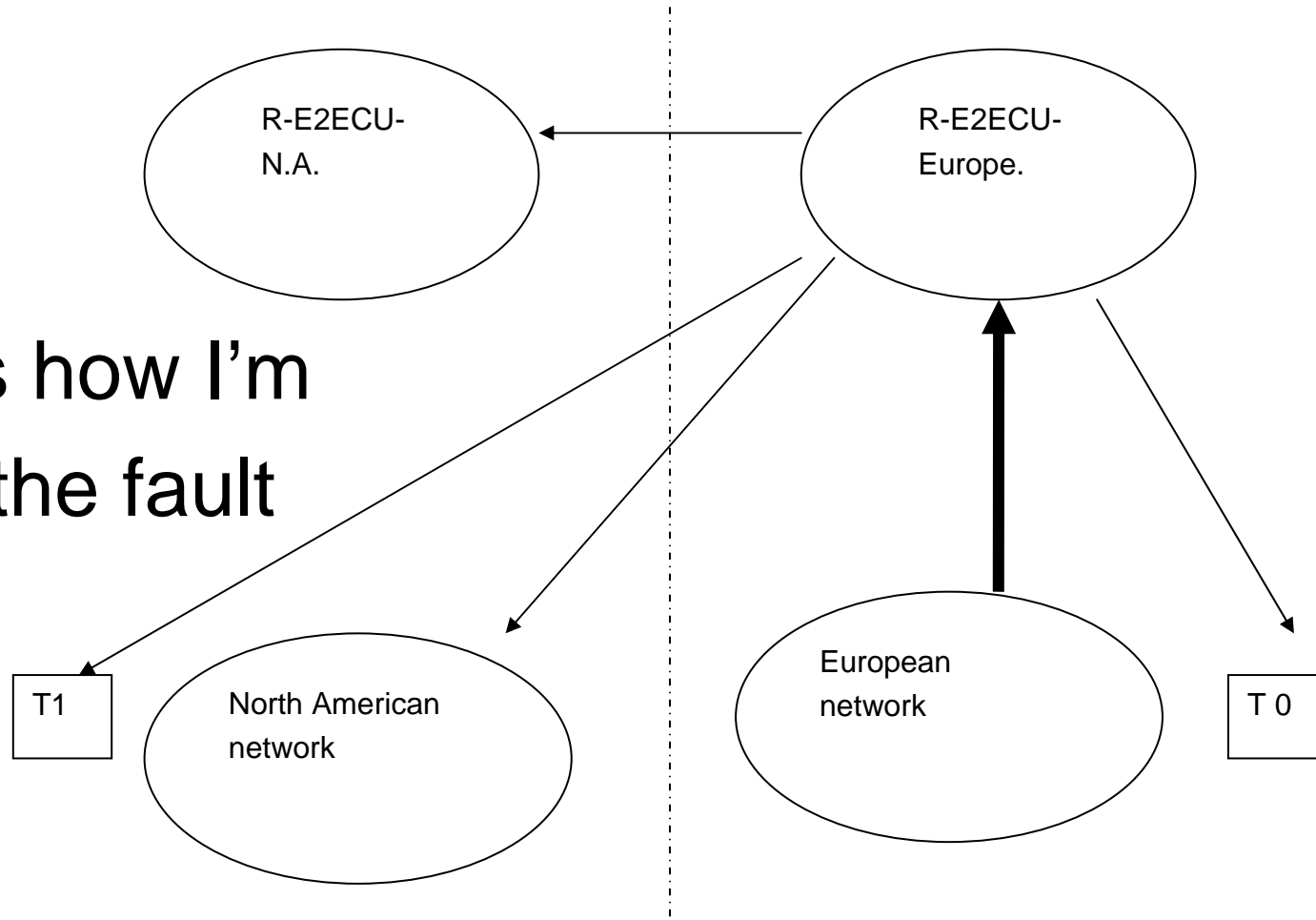


Sample Use case : T1 notices fault to T0, step 5



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This is how I'm fixing the fault





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Strengths

- each network will signal a fault to its corresponding R-E2ECU to ensure coverage of hours of operation
- Confidence that problem “is in good hands”
- Builds on established concepts, (the E2ECU), which will possibly be mirrored in other regions for regional needs



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Weaknesses

- Not a true 24x7 : faults will be followed up according to the operating times of the domain where the fault resides
 - True 24x7 can only be achieved by having all networks and 1 E2ECU operating 24x7
- Cumbersome



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Conclusion ?

- True 24x7 very unlikely to/cannot be achieved
- Is the single E2ECU sufficient and we live with 06:00-22:00 CET coverage ?
- Or should we make this extra effort for a small gain in response time coverage?



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My own view

- The one (soon to be operational) E2ECU provided by the GEANT2 NOC is sufficient **to start with**.
 - It can be extended to provide **global** coverage, but **not round the clock**
- ***Extended hours*** can be achieved as and when other regional E2ECUs become available and we co-ordinate communication between them