

Example Networks

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April, 2004

Network 1

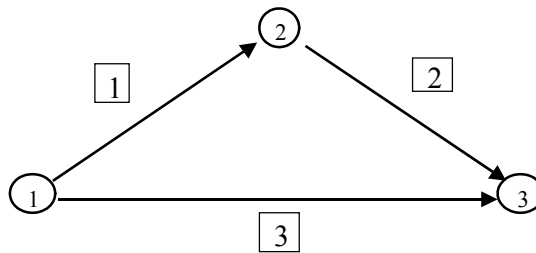


Figure 1: Network 1

The first network tested is represented in figure 1. It is a very simple network, with only 3 activities. The due date of this network T is 16 and the tardiness penalty c_L is 2 per unit time. The remaining parameters are represented in table 1. These parameters are the origin and target node of each activity, the parameter (λ) of the exponential distribution, that represents the Work Content of each activity, and the minimal and maximal amount of resource to allocate to each activity (x_{\min} and x_{\max}). The expected duration of activity 1 is $1/\lambda = 1/0.2 = 5$, and for activity 2 and 3, 10 and 14.29 respectively. In this way, the PERT expected duration for this network is 15. The due date of the project is selected to be a value above the PERT expected duration (approximately 5% more).

Table 1: Parameters for network 1

| Activity | 1 | 2 | 3 |
|------------|-----|-----|------|
| Origin | 1 | 2 | 1 |
| Target | 2 | 3 | 3 |
| λ | 0.2 | 0.1 | 0.07 |
| x_{\min} | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 |

Network 2

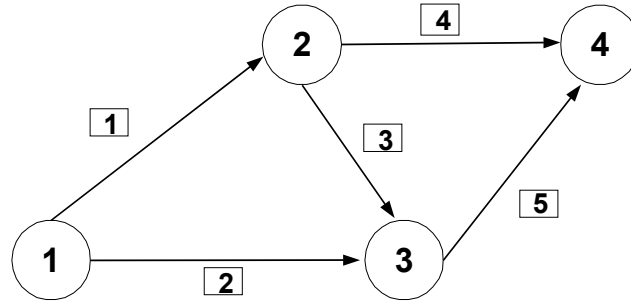


Figure 2: Network 2

This network has 5 activities. The due date is $T = 120$ and the tardiness cost is $c_L = 8$. In table 2 there are the remaining parameters. The PERT expected duration for this network is 115.

Table 2: Parameters for network 2

| Activity | 1 | 2 | 3 | 4 | 5 |
|---------------------|------|------|------|-------|-------|
| Origin | 1 | 1 | 2 | 2 | 3 |
| Target | 2 | 3 | 3 | 4 | 4 |
| λ | 0.02 | 0.03 | 0.04 | 0.024 | 0.025 |
| \mathbf{x}_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| \mathbf{x}_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 3

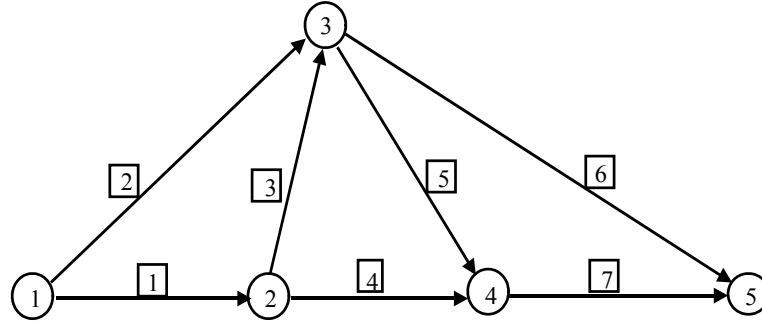


Figure 3: Network 3

This network has 7 activities (see figure 3). The due date $T = 66$ and the tardiness cost $c_L = 5$. The remaining parameters are represented in table 3. The PERT expected duration for this network is 62.9.

Table 3: Parameters for network 3

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------|------|------|------|------|------|------|------|
| Origin | 1 | 1 | 2 | 2 | 3 | 3 | 4 |
| Target | 2 | 3 | 3 | 4 | 4 | 5 | 5 |
| λ | 0.08 | 0.06 | 0.09 | 0.05 | 0.07 | 0.03 | 0.04 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 4

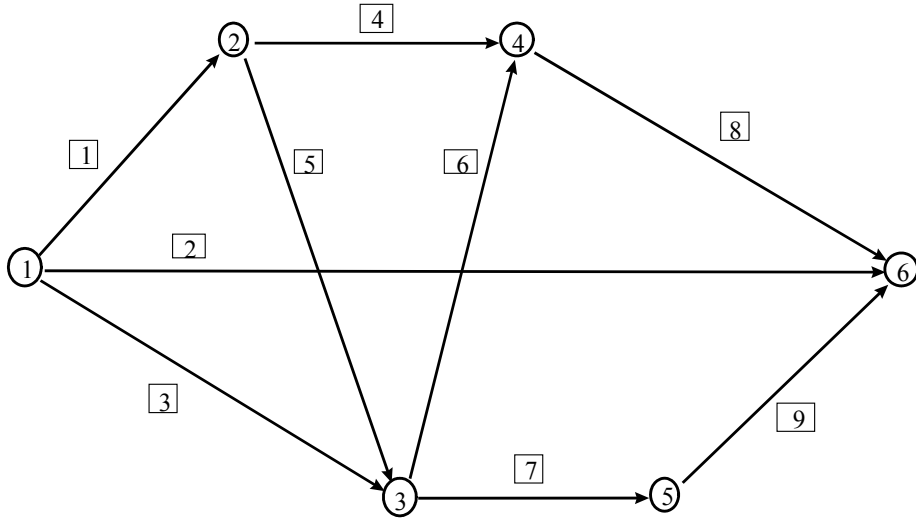


Figure 4: Network 4

This network has 9 activities. For this network, $T = 105$ and $c_L = 4$. See table 4 for the remaining parameters. The PERT expected duration for this network is 100.

Table 4: Parameters for network 4

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|------|------|------|-------|------|------|-------|------|-------|
| Origin | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 5 |
| Target | 2 | 6 | 3 | 4 | 3 | 4 | 5 | 6 | 6 |
| λ | 0.04 | 0.01 | 0.07 | 0.035 | 0.05 | 0.06 | 0.045 | 0.06 | 0.039 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 5

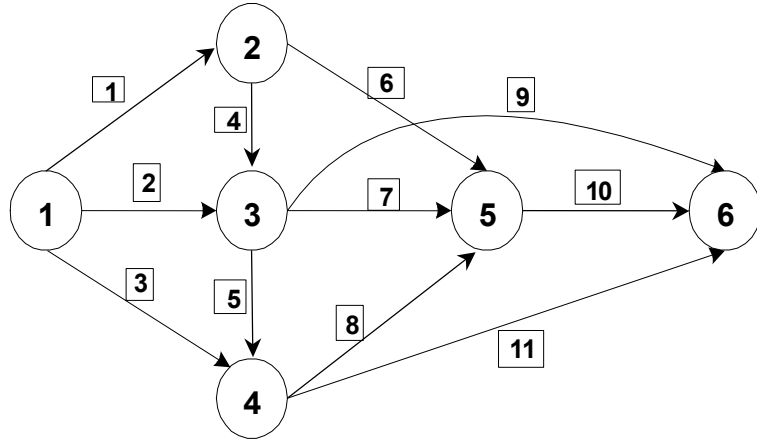


Figure 5: Network 5

Network 5 (see figure 5) is of larger dimension (11 activities). For this network, $T = 28$ (due date) and $c_L = 8$ (tardiness cost). The remaining parameters are presented in table 5. The PERT expected duration for this network is 26.67.

Table 5: Parameters for network 5

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---------------|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|
| Origin | 1 | 1 | 1 | 2 | 3 | 2 | 3 | 4 | 3 | 5 | 4 |
| Target | 2 | 3 | 4 | 3 | 4 | 5 | 5 | 5 | 6 | 6 | 6 |
| λ | 0.1 | 0.09 | 0.4 | 0.2 | 0.3 | 0.08 | 0.4 | 0.2 | 0.1 | 0.3 | 0.3 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 6

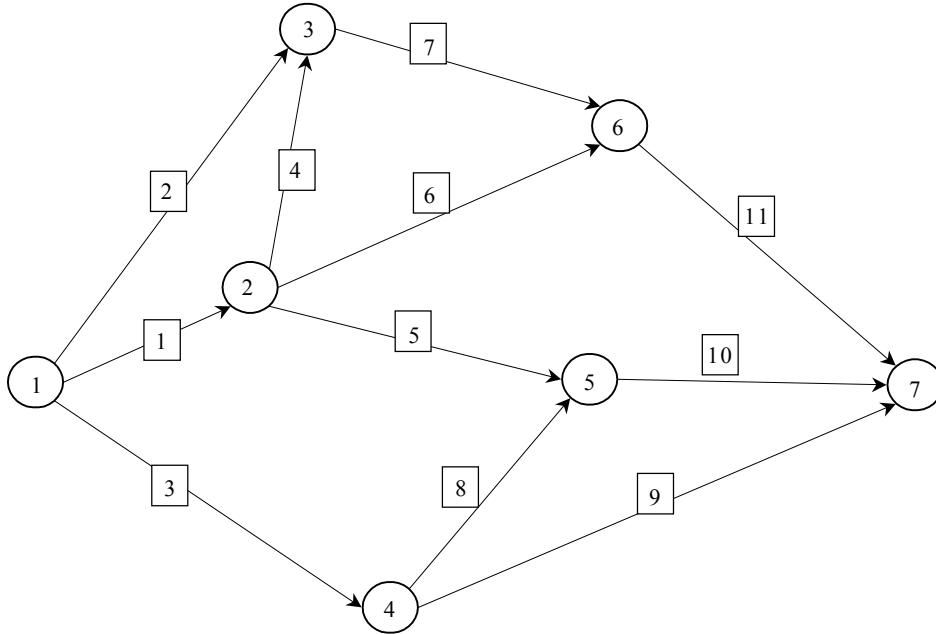


Figure 6: Network 6

This network has 11 activities. The due date is $T = 65$ and the cost of tardiness is $c_L = 5$. See table 6 for the rest of the information. The PERT expected duration for this network is 62.08.

Table 6: Parameters for network 8

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------------|-----|------|------|------|-----|------|------|------|-------|------|------|
| Origin | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 4 | 5 | 6 |
| Target | 2 | 3 | 4 | 3 | 5 | 6 | 6 | 5 | 7 | 7 | 7 |
| λ | 0.1 | 0.12 | 0.05 | 0.08 | 0.2 | 0.04 | 0.03 | 0.04 | 0.024 | 0.15 | 0.16 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 7

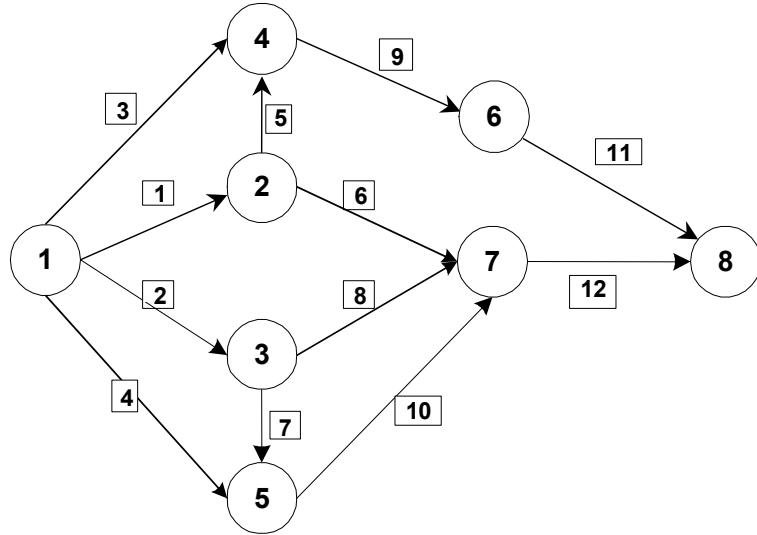


Figure 7: Network 7

Network 7 has one more activity than the last one (see figure 7), and different topology. The due date is $T = 47$ and the tardiness cost $c_L = 4$. The remaining parameters are presented in table 7. The PERT expected duration for this network is 44.72.

Table 7: Parameters for network 7

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|-----|------|------|-----|------|------|-----|------|------|-----|------|-----|
| Origin | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 5 | 6 | 7 |
| Target | 2 | 3 | 4 | 5 | 4 | 7 | 5 | 7 | 6 | 7 | 8 | 8 |
| λ | 0.1 | 0.09 | 0.08 | 0.1 | 0.09 | 0.08 | 0.1 | 0.09 | 0.08 | 0.1 | 0.09 | 0.1 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 8

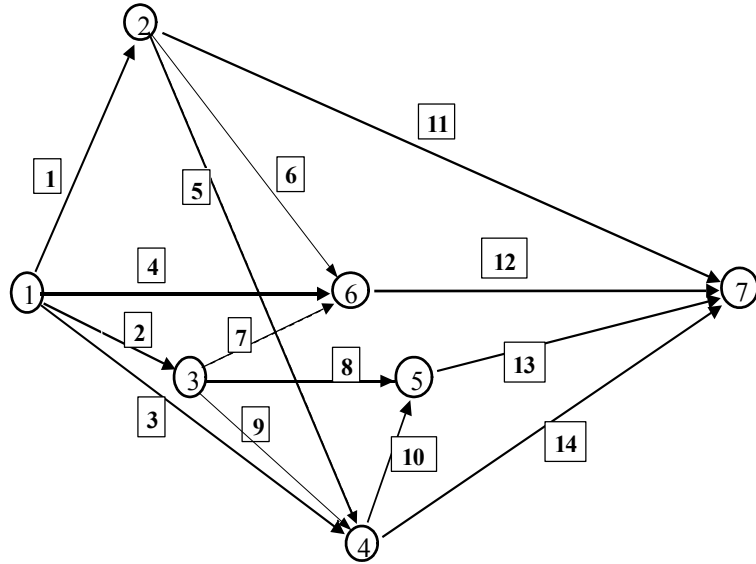


Figure 8: Network 8

This network has 14 activities. T is 37 and c_L is 3. The remaining parameters are presented in table 8. The PERT expected duration for this network is 35.5.

Table 8: Parameters for network 8

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------|-----|------|------|-----|-----|------|-----|------|-----|------|------|-----|-------|-----|
| Origin | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 4 | 2 | 6 | 5 | 4 |
| Target | 2 | 3 | 4 | 6 | 4 | 6 | 6 | 5 | 4 | 5 | 7 | 7 | 7 | 7 |
| λ | 0.2 | 0.25 | 0.16 | 0.2 | 0.1 | 0.16 | 0.5 | 0.25 | 0.2 | 0.08 | 0.09 | 0.1 | 0.125 | 0.1 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 9

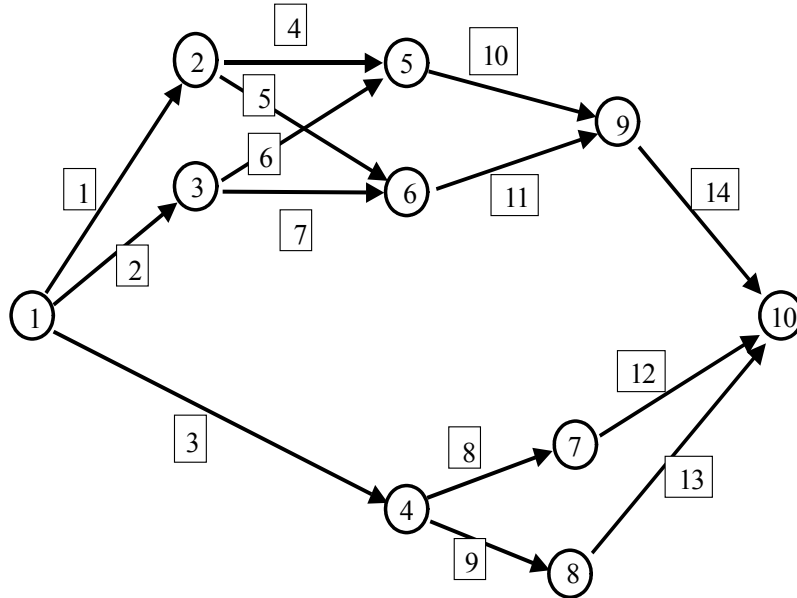


Figure 9: Network 9

Network 9 has the same number of activities as the previous one (14 activities). Its due date is 188 and has a tardiness cost of 6. The other parameters can be seen in table 9. The PERT expected duration for this network is 178.57.

Table 9: Parameters for network 9

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------|------|------|------|-------|-------|-------|------|
| Origin | 1 | 1 | 1 | 2 | 2 | 3 | 3 |
| Target | 2 | 3 | 4 | 5 | 6 | 5 | 6 |
| λ | 0.02 | 0.03 | 0.04 | 0.025 | 0.035 | 0.045 | 0.05 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Origin | 4 | 4 | 5 | 6 | 7 | 8 | 9 |
| Target | 7 | 8 | 9 | 9 | 10 | 10 | 10 |
| λ | 0.06 | 0.03 | 0.02 | 0.015 | 0.02 | 0.025 | 0.03 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 10

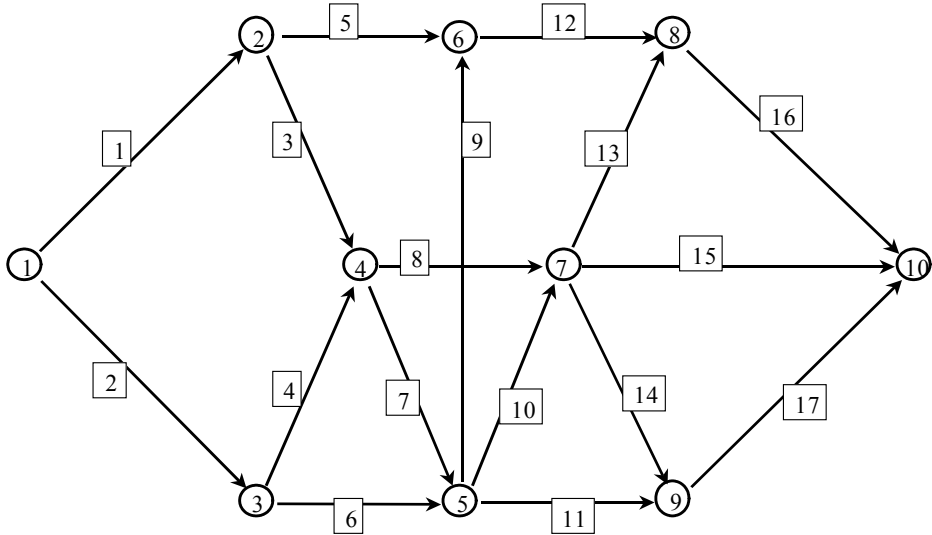


Figure 10: Network 10

Network 10 has 17 activities. For this network, $T = 49$ and $c_L = 7$. The remaining parameters are represented in table 13. The PERT expected duration for this network is 44.98.

Table 10: Parameters for network 10

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------------|-------|-----|-----|-----|------|-----|-----|-------|-------|
| Origin | 1 | 1 | 2 | 3 | 2 | 3 | 4 | 4 | 5 |
| Target | 2 | 3 | 4 | 4 | 6 | 5 | 5 | 7 | 6 |
| λ | 0.167 | 0.1 | 0.2 | 0.1 | 0.25 | 0.2 | 0.1 | 0.333 | 0.333 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

| Activity | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---------------|------|-----|-------|-------|-----|-------|-------|------|
| Origin | 5 | 5 | 6 | 7 | 7 | 7 | 8 | 9 |
| Target | 7 | 9 | 8 | 8 | 9 | 10 | 10 | 10 |
| λ | 0.25 | 0.5 | 0.167 | 0.143 | 0.5 | 0.125 | 0.167 | 0.11 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 11

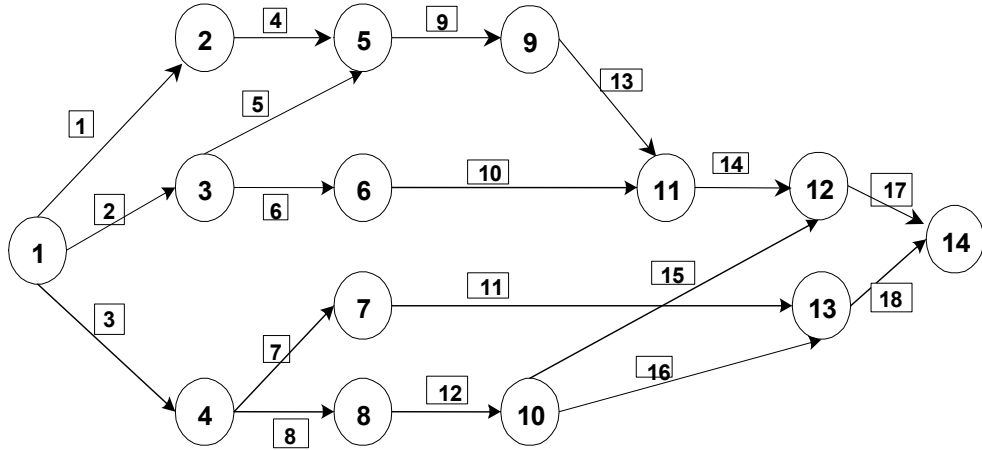


Figure 11: Network 11

Network 11 can be seen in figure 11, and it has 18 activities. Here, $T = 110$ and $c_L = 10$. The remaining parameters are presented in table 11. The PERT expected duration for this network is 106.11.

Table 11: Parameters for network 11

| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------------|------|------|------|------|------|------|------|------|------|
| Origin | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 5 |
| Target | 2 | 3 | 4 | 5 | 5 | 6 | 7 | 8 | 9 |
| λ | 0.06 | 0.04 | 0.1 | 0.07 | 0.08 | 0.04 | 0.08 | 0.2 | 0.07 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Origin | 6 | 7 | 8 | 9 | 11 | 10 | 10 | 12 | 13 |
| Target | 11 | 13 | 10 | 11 | 12 | 12 | 13 | 14 | 14 |
| λ | 0.05 | 0.08 | 0.07 | 0.09 | 0.09 | 0.05 | 0.09 | 0.04 | 0.06 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 12

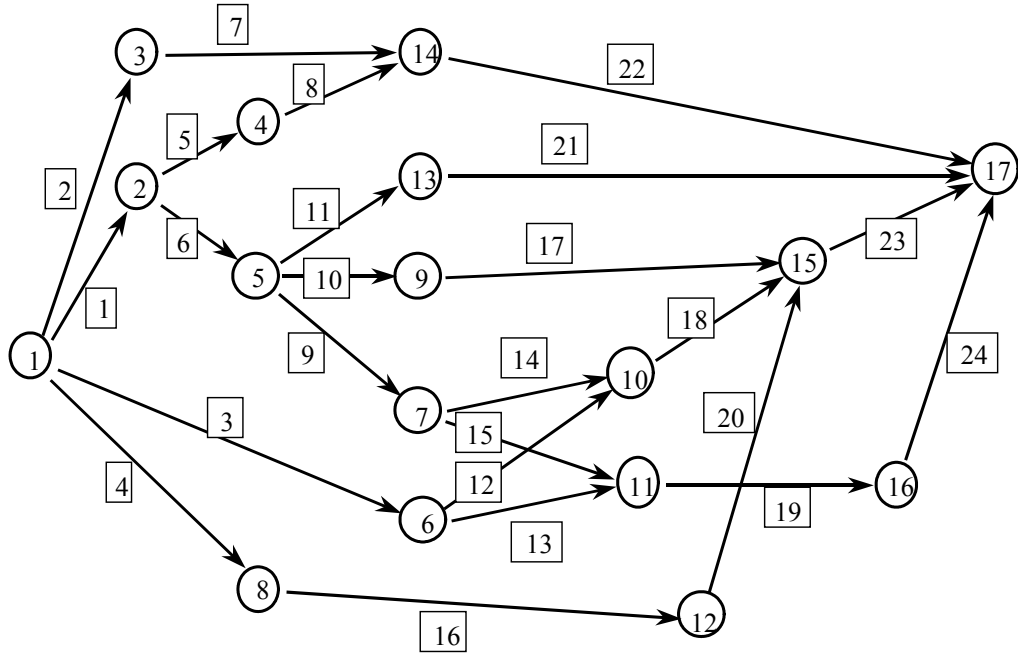


Figure 12: Network 12

Network 12 can be seen in figure 12, and it is much bigger than the last one (24 activities). For this network, $T = 223$ and $c_L = 12$. The remaining parameters are presented in table 12. The PERT expected duration for this network is 212.05.

Table 12: Parameters for network 12

| | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|-------|--------|
| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Origin | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 |
| Target | 2 | 3 | 6 | 8 | 4 | 5 | 14 | 14 |
| λ | 0.025 | 0.02 | 0.0222 | 0.0182 | 0.0333 | 0.0286 | 0.025 | 0.04 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Origin | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 8 |
| Target | 7 | 9 | 13 | 10 | 11 | 10 | 11 | 12 |
| λ | 0.0333 | 0.025 | 0.02 | 0.0385 | 0.0357 | 0.05 | 0.04 | 0.0333 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Origin | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Target | 15 | 15 | 16 | 15 | 17 | 17 | 17 | 17 |
| λ | 0.05 | 0.0556 | 0.0278 | 0.0222 | 0.0667 | 0.0167 | 0.04 | 0.0217 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Network 13

Network 13 (see figure 13), it even bigger than the previous ones (38 activities). For this network, $T = 151$ and $c_L = 5$. The remaining parameters are presented in table 13. The PERT expected duration for this network is 143.99.

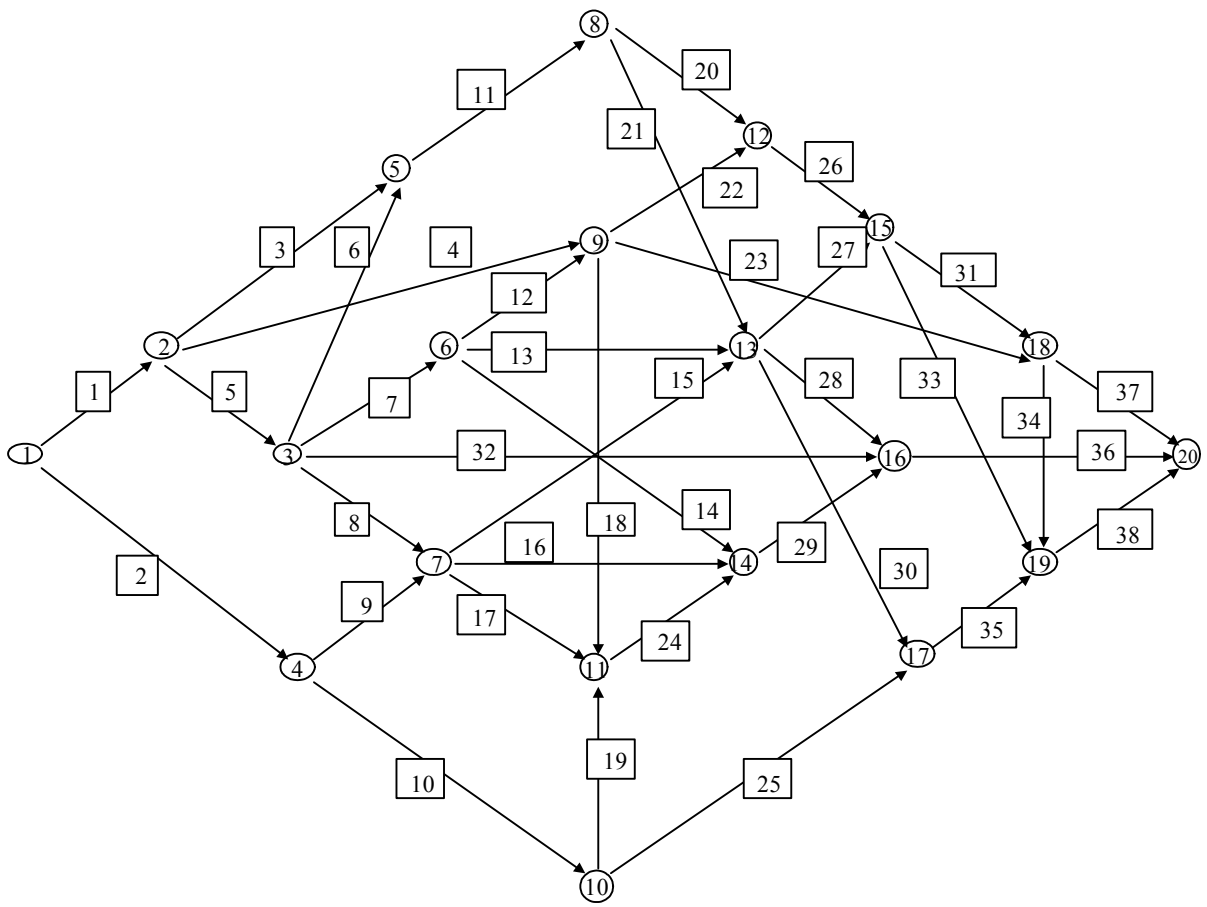


Figure 13: Network 13

Network 14

The last is network 14, which is the biggest one tested (see figure 14). This network has 76 activities. The due date is $T = 121$ and the tardiness cost is 4. The remaining parameters are represented in table 14. The PERT expected duration for this network is 115.01.

Table 13: Parameters for network 13

| | | | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Origin | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Target | 2 | 4 | 5 | 9 | 3 | 5 | 6 | 7 | 7 | 10 |
| λ | 0.0625 | 0.0333 | 0.0625 | 0.05 | 0.1 | 0.0556 | 0.0667 | 0.0909 | 0.0833 | 0.025 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Origin | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 9 | 10 | 8 |
| Target | 8 | 9 | 13 | 14 | 13 | 14 | 11 | 11 | 11 | 12 |
| λ | 0.05 | 0.0625 | 0.1 | 0.125 | 0.7143 | 0.0476 | 0.0625 | 0.05 | 0.0526 | 0.0588 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | |
| Origin | 8 | 9 | 9 | 11 | 10 | 12 | 13 | 13 | 14 | |
| Target | 13 | 12 | 18 | 14 | 17 | 15 | 15 | 16 | 16 | |
| λ | 0.0667 | 0.0555 | 0.0476 | 0.0625 | 0.05 | 0.0555 | 0.0625 | 0.0833 | 0.0555 | |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| Activity | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | |
| Origin | 13 | 15 | 3 | 15 | 18 | 17 | 16 | 18 | 19 | |
| Target | 17 | 18 | 16 | 19 | 19 | 19 | 20 | 20 | 20 | |
| λ | 0.0417 | 0.0909 | 0.0909 | 0.0455 | 0.0417 | 0.0333 | 0.0667 | 0.125 | 0.1 | |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |

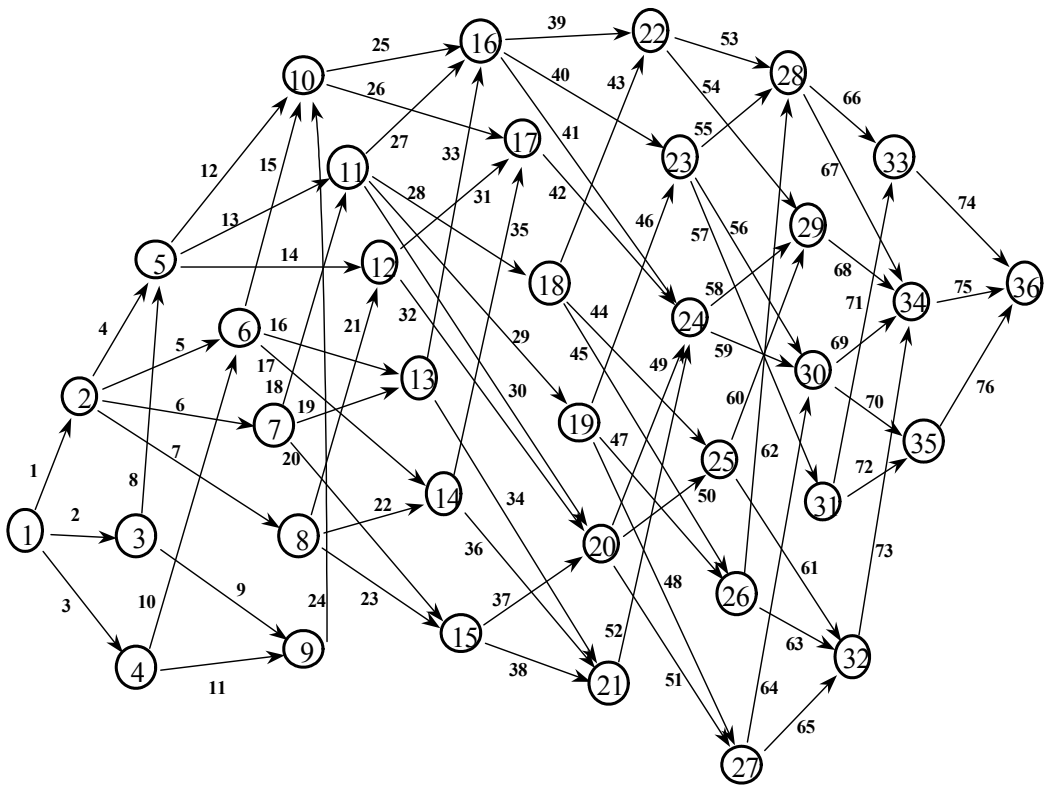


Figure 14: Network 14

Table 14: Parameters for network 14

| | | | | | | | | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|
| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Origin | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 |
| Target | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 5 | 9 | 6 | 9 | 10 | 11 |
| λ | 0.06 | 0.08 | 0.07 | 0.5 | 0.2 | 0.1 | 0.09 | 0.6 | 0.3 | 0.07 | 0.08 | 0.35 | 0.26 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| Origin | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 10 | 10 |
| Target | 12 | 10 | 13 | 14 | 11 | 13 | 15 | 12 | 14 | 15 | 10 | 16 | 17 |
| λ | 0.44 | 0.085 | 0.025 | 0.55 | 0.075 | 0.095 | 0.15 | 0.25 | 0.15 | 0.35 | 0.4 | 0.37 | 0.48 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| Origin | 11 | 11 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 |
| Target | 16 | 18 | 19 | 20 | 17 | 20 | 16 | 21 | 17 | 21 | 20 | 21 | 22 |
| λ | 0.085 | 0.08 | 0.15 | 0.25 | 0.35 | 0.4 | 0.07 | 0.6 | 0.15 | 0.25 | 0.15 | 0.065 | 0.075 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| Origin | 16 | 16 | 17 | 18 | 18 | 18 | 19 | 19 | 19 | 20 | 20 | 20 | 21 |
| Target | 23 | 24 | 24 | 22 | 25 | 26 | 23 | 26 | 27 | 24 | 25 | 27 | 24 |
| λ | 0.15 | 0.22 | 0.34 | 0.52 | 0.07 | 0.35 | 0.12 | 0.07 | 0.13 | 0.25 | 0.35 | 0.46 | 0.21 |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Activity | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | |
| Origin | 22 | 22 | 23 | 23 | 23 | 24 | 24 | 25 | 25 | 26 | 26 | 27 | |
| Target | 28 | 29 | 28 | 30 | 31 | 29 | 30 | 29 | 32 | 28 | 32 | 30 | |
| λ | 0.084 | 0.2 | 0.45 | 0.55 | 0.09 | 0.12 | 0.18 | 0.09 | 0.55 | 0.25 | 0.35 | 0.07 | |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| Activity | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | |
| Origin | 27 | 28 | 28 | 29 | 30 | 30 | 31 | 31 | 32 | 33 | 34 | 35 | |
| Target | 32 | 33 | 34 | 34 | 34 | 35 | 33 | 35 | 34 | 36 | 36 | 36 | |
| λ | 0.08 | 0.14 | 0.35 | 0.095 | 0.21 | 0.32 | 0.41 | 0.35 | 0.64 | 0.37 | 0.46 | 0.35 | |
| x_{\min} | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| x_{\max} | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |