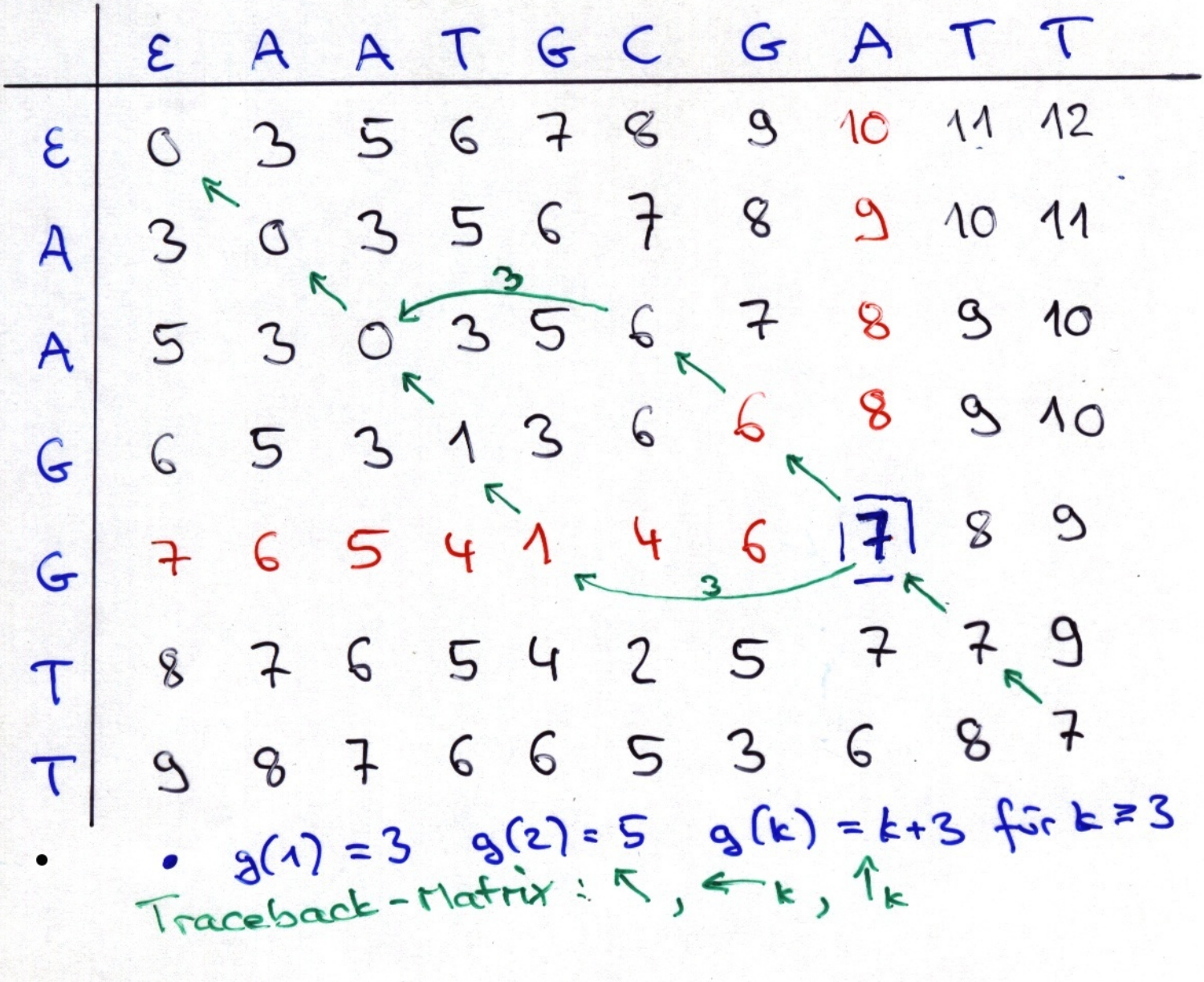
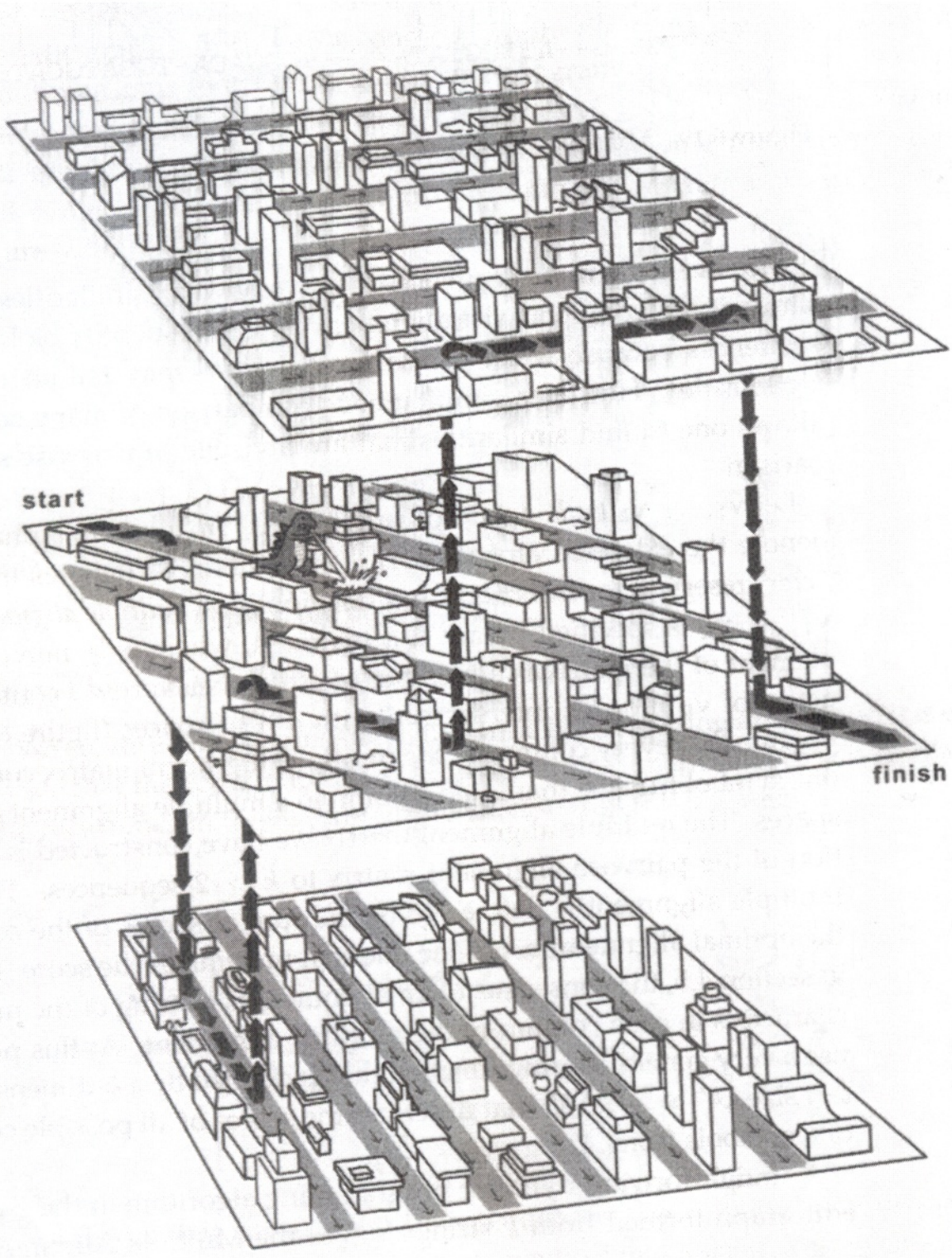

ε A A T G C G A T T
ε 0 3 5 6 7 8 9 10 11 12
A 3 0 3 5 6 7 8 9 10 11
A 5 3 0 3 5 6 7 8 9 10
G 6 5 3 1 3 6 6 8 9 10
G 7 6 5 4 1 4 6 7 8 9
T 8 7 6 5 4 2 5 7 7 9
T 9 8 7 6 6 5 3 6 8 7
3
3
• g(1) = 3 g(2) = 5 g(k) = k+3 für k ≥ 3
Traceback-Matrix: ↖, ←k, ↑k

$$D[4,7] = \min \begin{cases} D[3,6] + \delta(G,A) \\ D[4,6] + g(1) \\ D[4,5] + g(2) \\ D[4,4] + g(3) \\ D[4,3] + g(4) \\ D[4,2] + g(5) \\ D[4,1] + g(6) \\ D[4,0] + g(7) \\ D[3,7] + g(1) \\ D[2,7] + g(2) \\ D[1,7] + g(3) \\ D[0,7] + g(4) \end{cases} = \min \begin{cases} 6+1 = 7 \\ 6+3 \\ 4+5 \\ 1+6 = 7 \\ 4+7 \\ 5+8 \\ 6+9 \\ 7+10 \\ 8+3 \\ 8+5 \\ 9+6 \\ 10+7 \end{cases}$$


start
finish

Alignment mit affinen Kosten

$$P[i,j] = \min \begin{cases} D[i-1,j] + \alpha + \beta \\ P[i-1,j] + \beta \end{cases}$$

$$Q[i,j] = \min \begin{cases} D[i,j-1] + \alpha + \beta \\ Q[i,j-1] + \beta \end{cases}$$

$$D[i,j] = \min \begin{cases} D[i-1,j-1] + \delta(u_i, v_j) \\ P[i,j] \\ Q[i,j] \end{cases}$$

$$g(k) = \alpha + \beta \cdot k$$

Init

$P[0,j] = \infty$ für $j \geq 0$

$P[i,0] = g(i)$ für $i \geq 1$

$Q[0,j] = g(j)$ für $j \geq 1$

$Q[i,0] = \infty$ für $i \geq 0$

$D[0,0] = 0$

$D[0,k] = D[k,0] = g(k)$ für $k \geq 1$