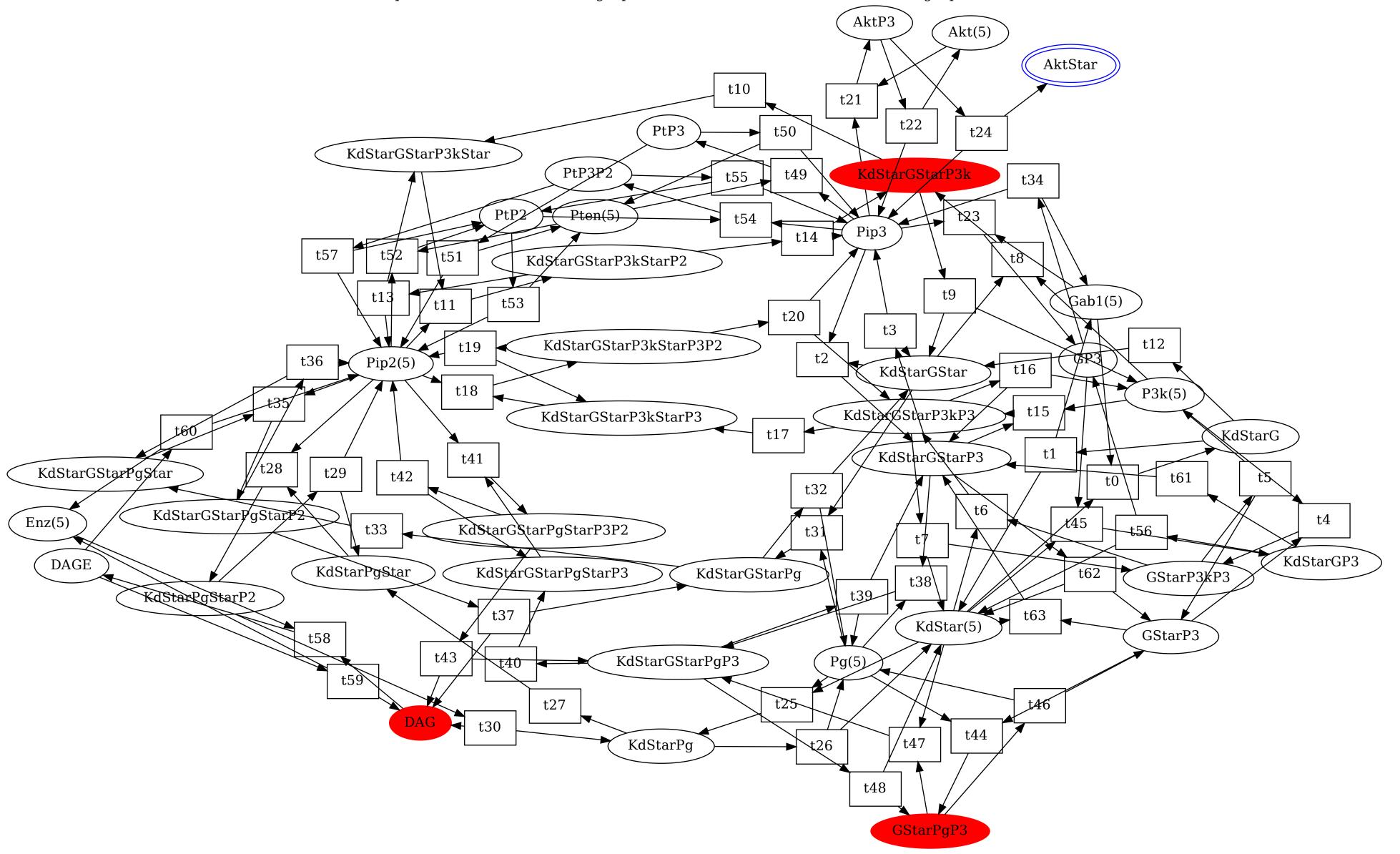
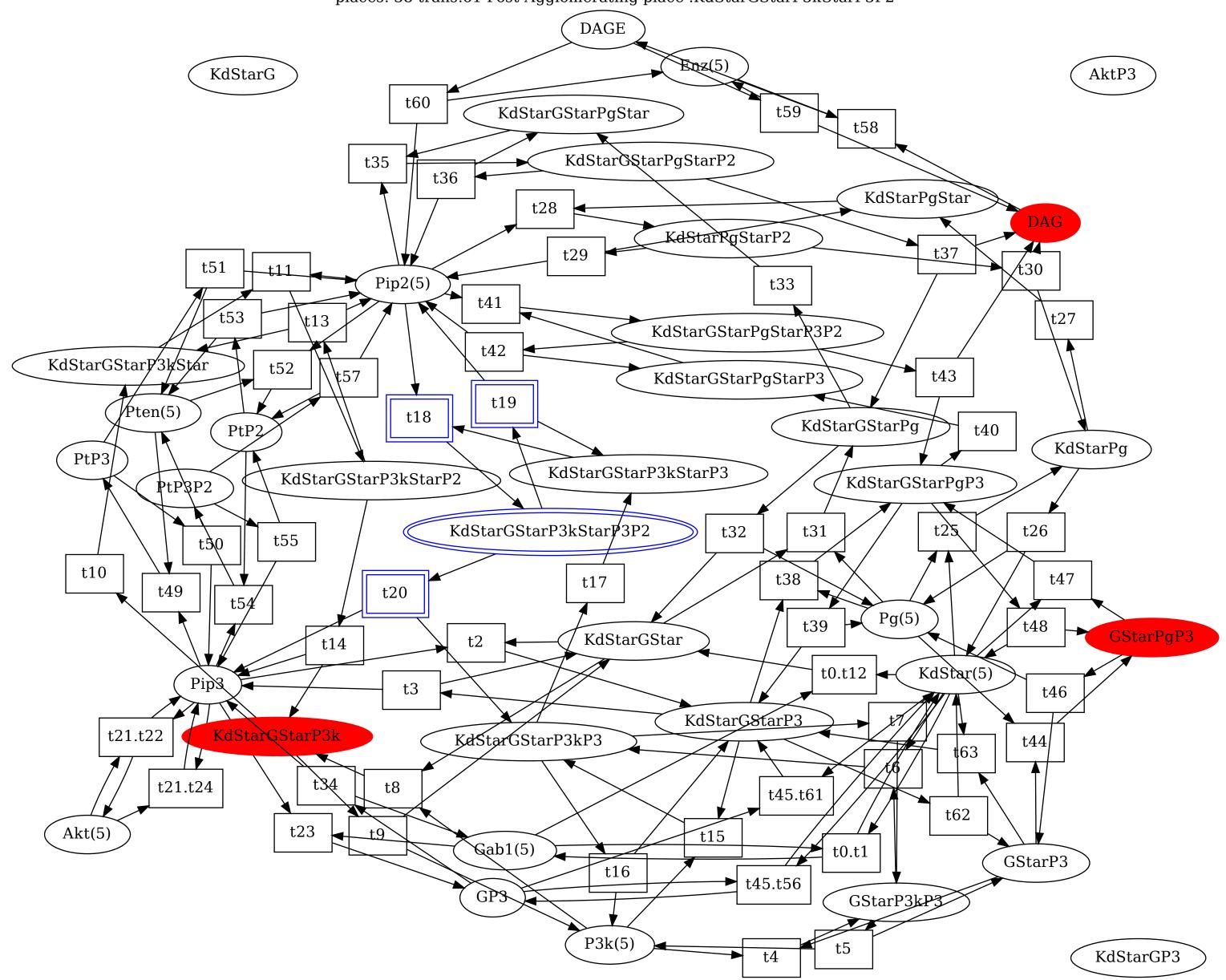
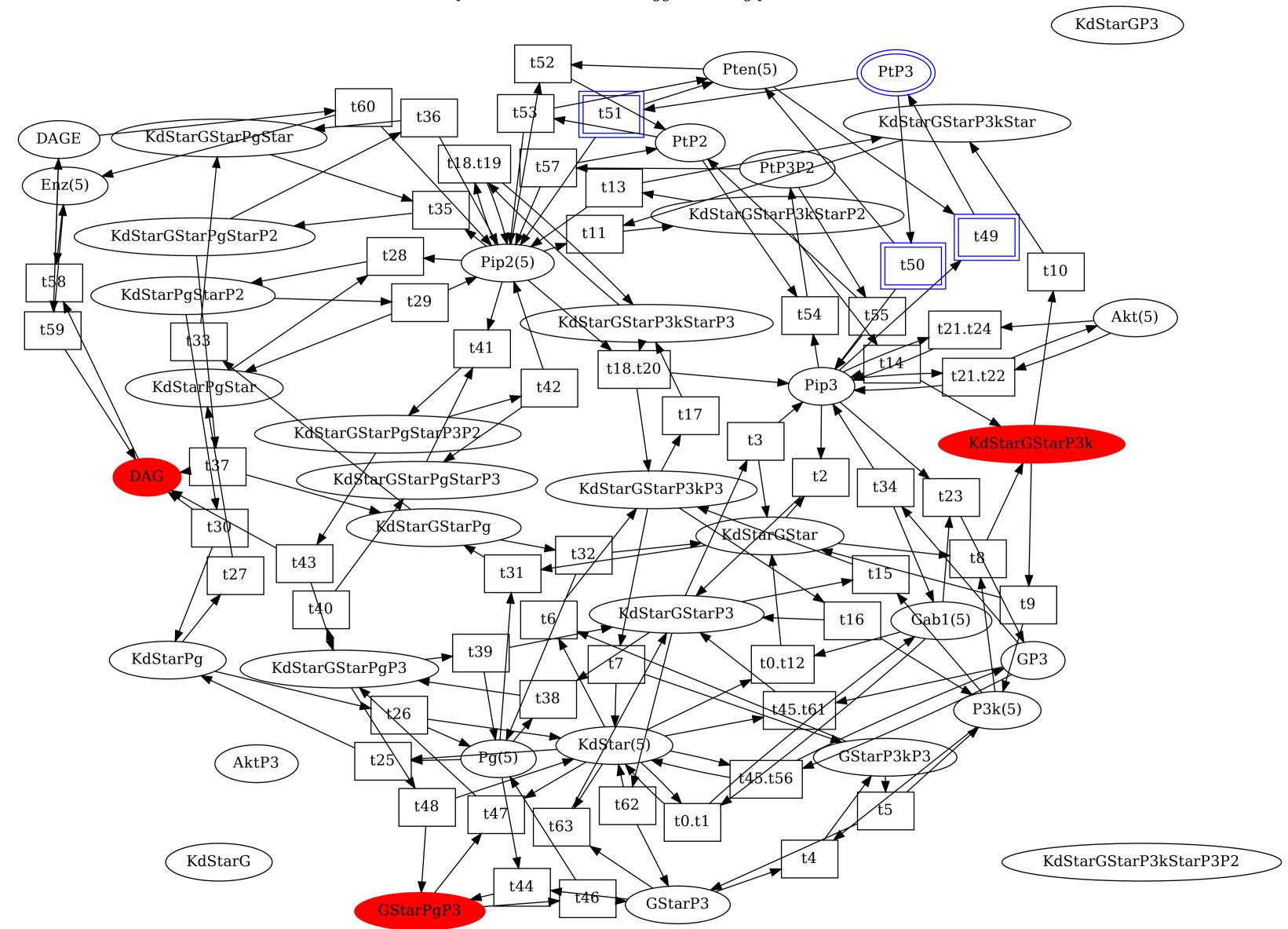


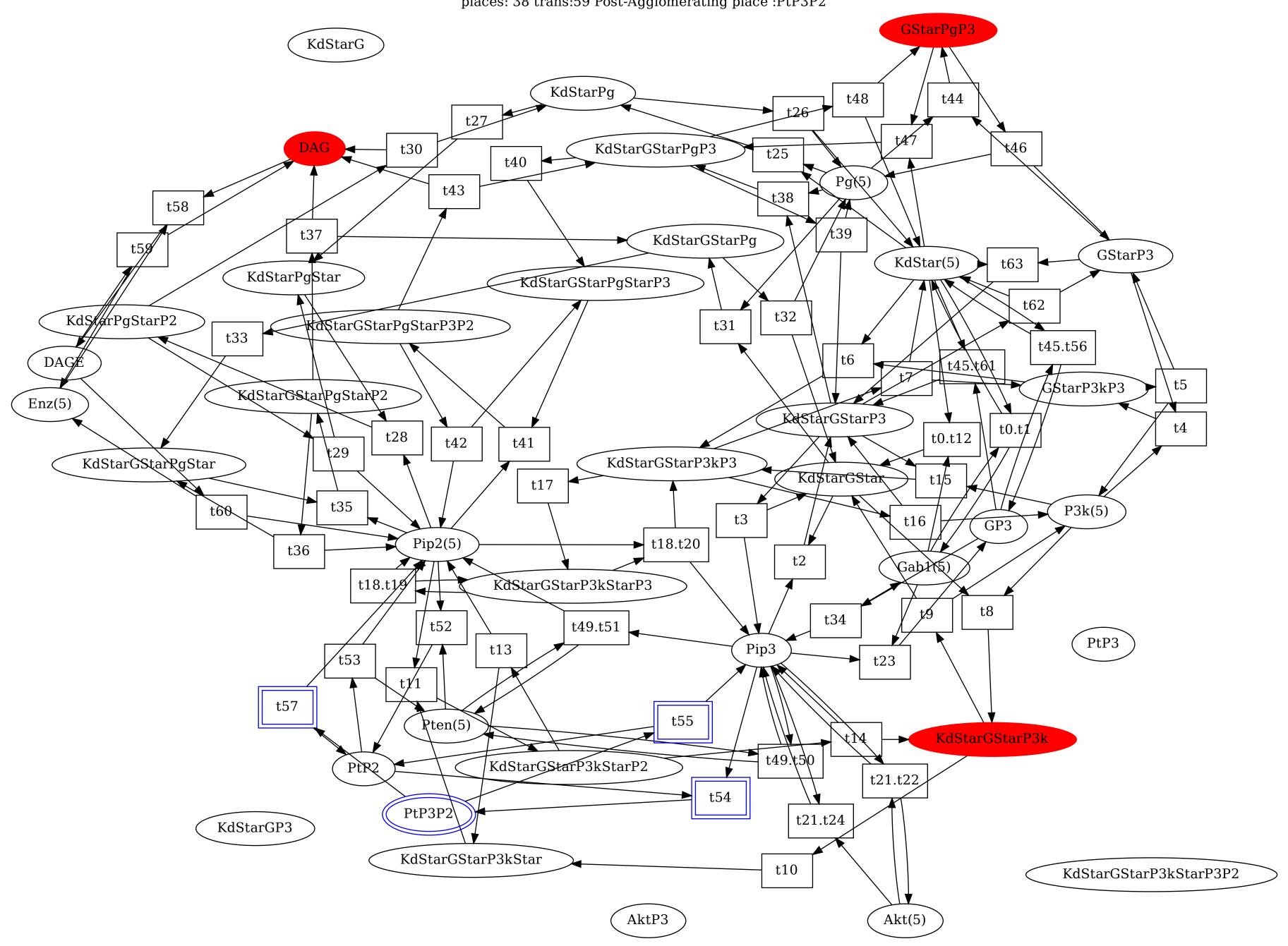
places: 39 trans:64 Discarding 1 places with rule Prefix Of Interest discarding 1 places

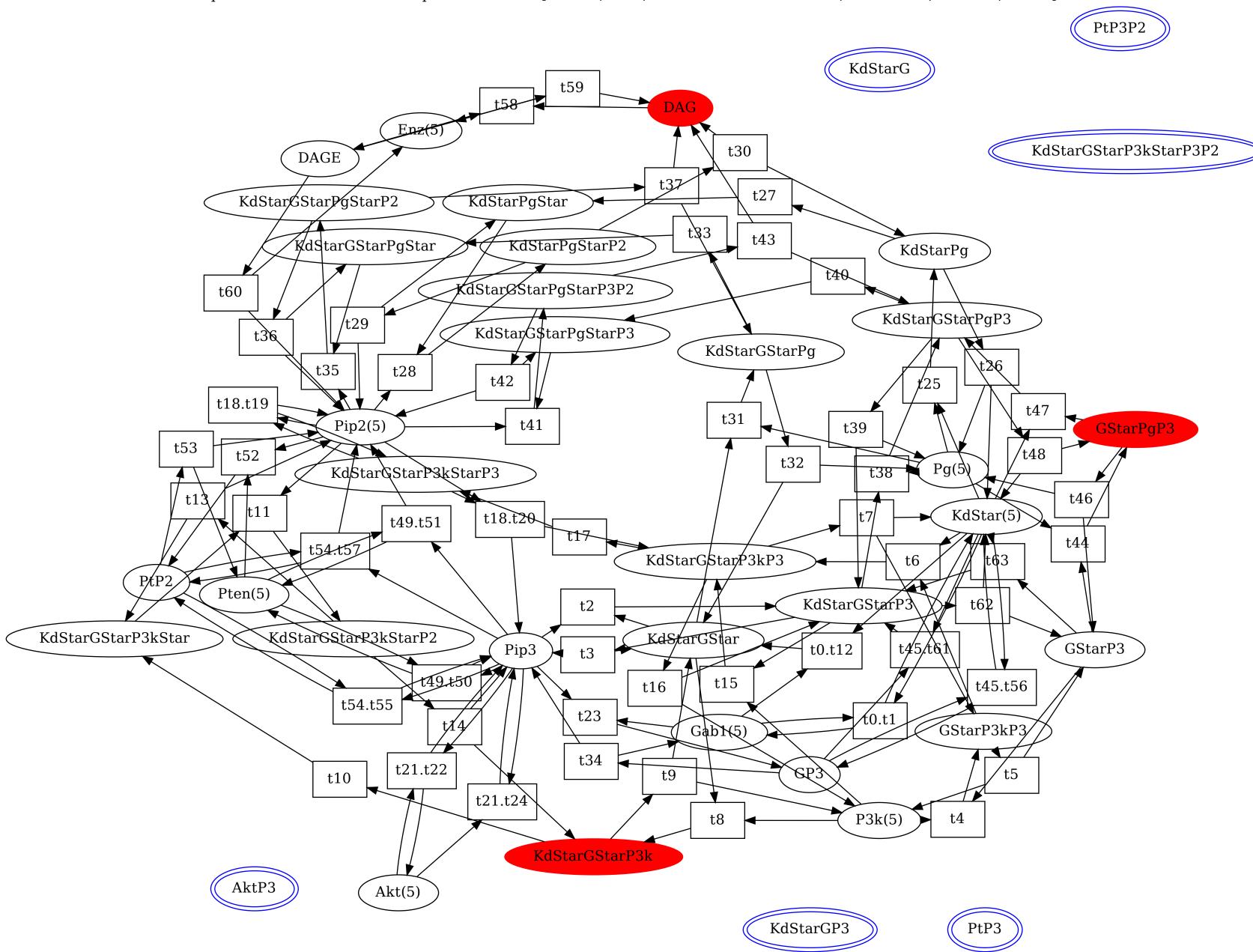


places: 38 trans:61 Post-Agglomerating place :KdStarGStarP3kStarP3P2

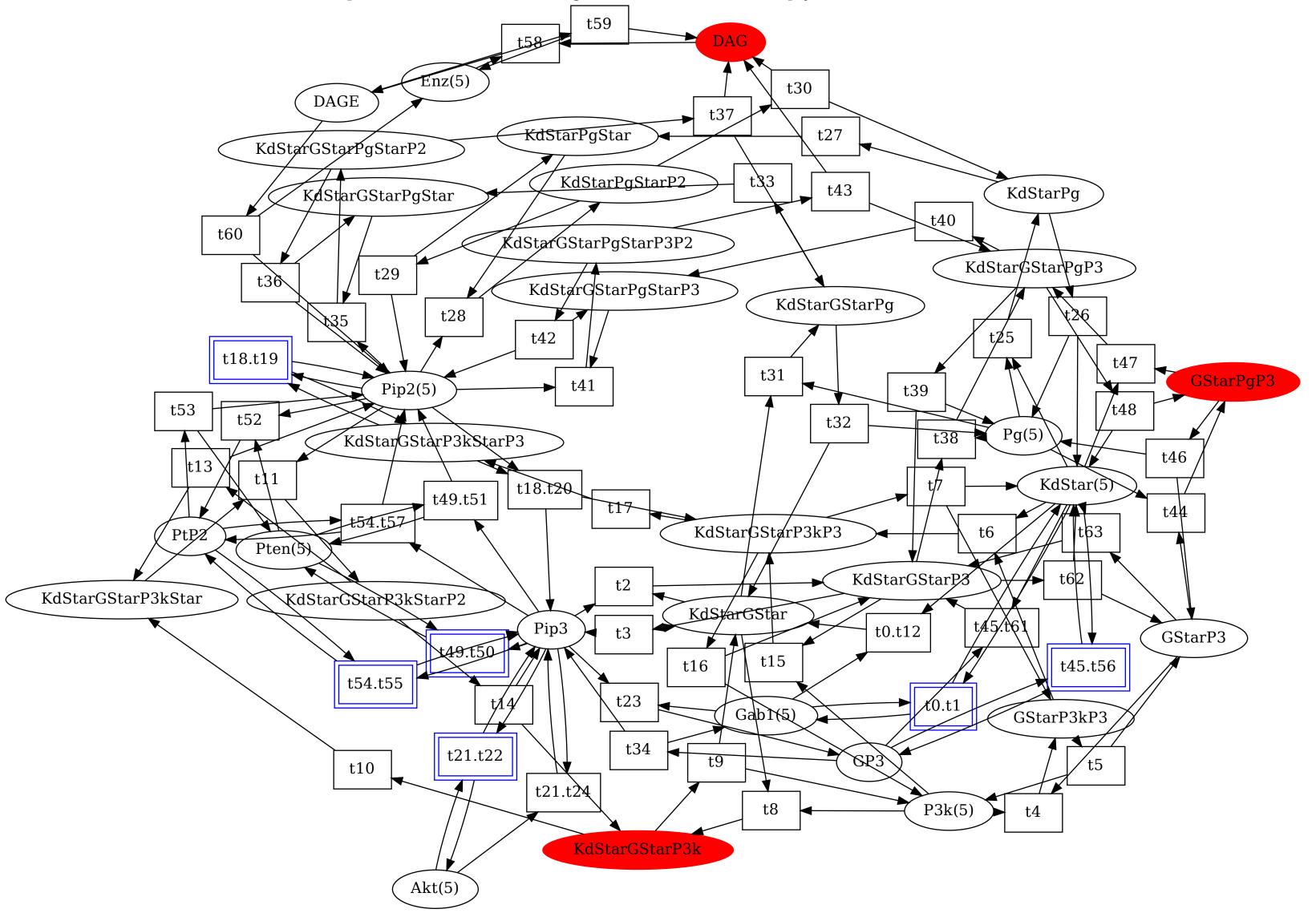






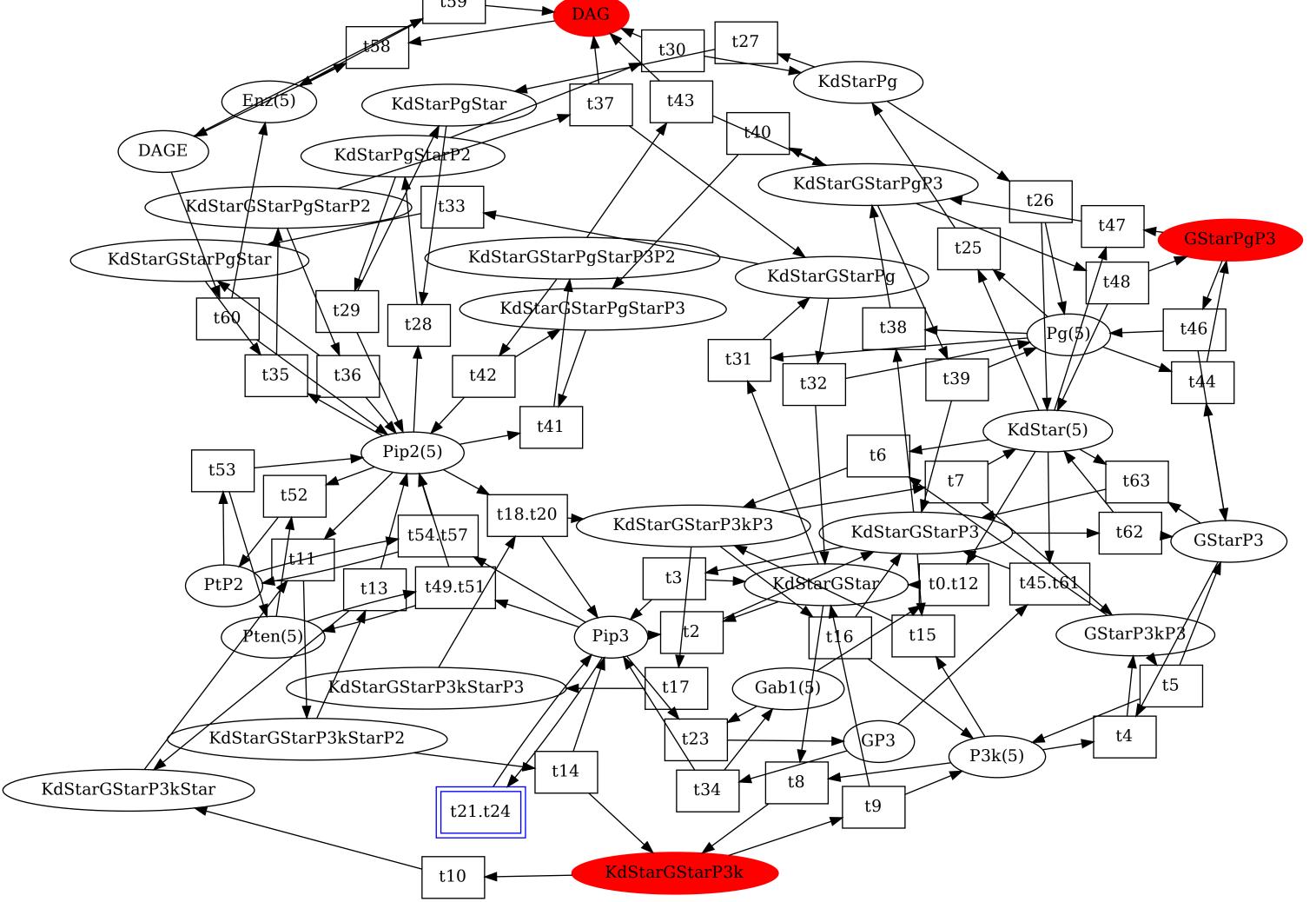


places: 32 trans:58 Discarding 6 transitions with rule Empty Transition effects.



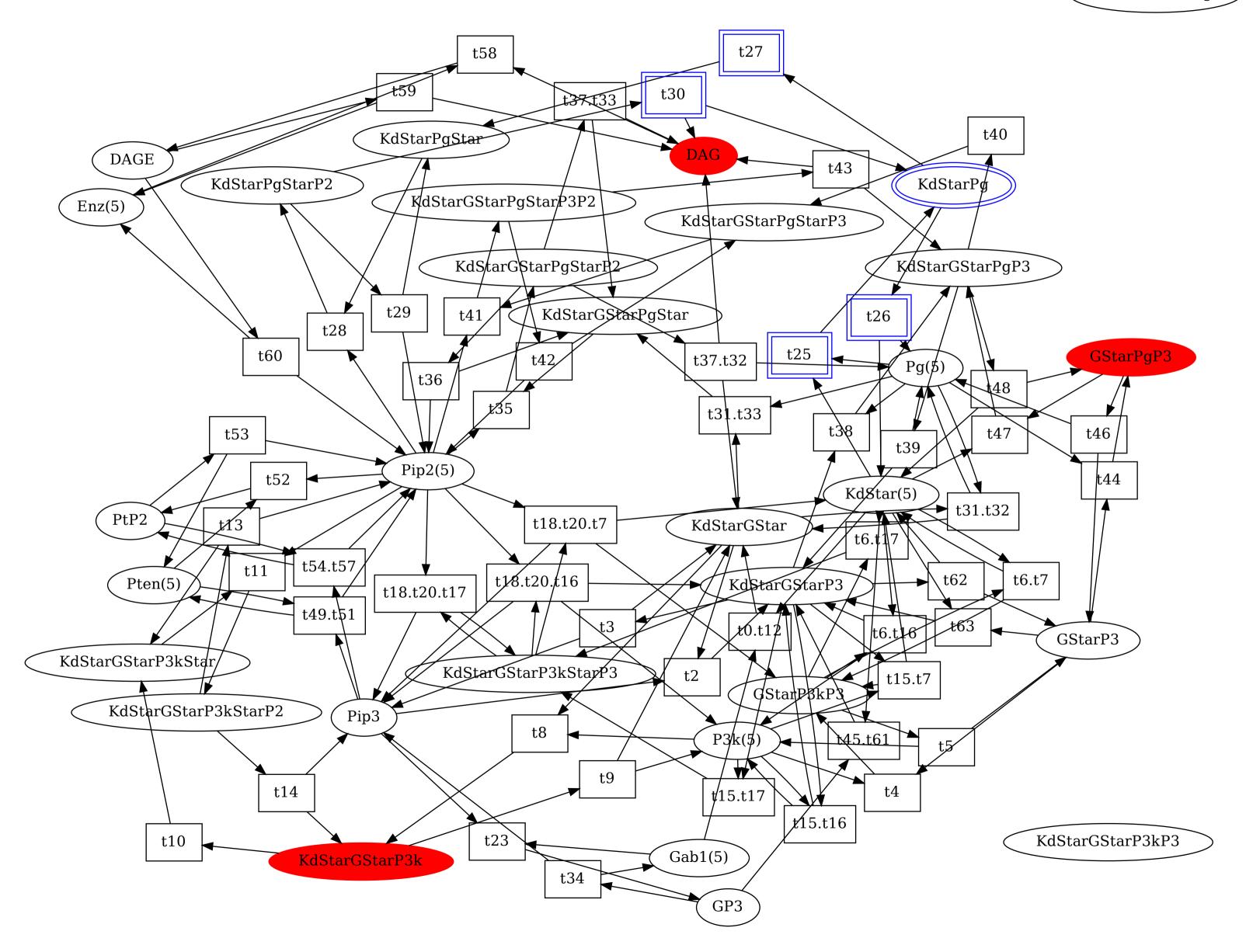
places: 32 trans:52 Discarding 1 places with rule Prefix Of Interest discarding 1 places t59 DAG t27 t30 t58 KdStarPg t43 t37 t40 KdStarPgStar KdStarGStarPgP3 KdStarPgStarP2 t26 GStarPgP3 t47 DAGE \t33 t25 KdStarGStarPgStarP2 KdStarGStarPg **t**48 kdStarGStarPgStarP3P2 KdStarGStarPgStar t46 t38 **Rg**(5) t29 KdStarGStarPgStarP3 t28 t444 t60 t39 t31 t32 t42 t36 KdStar(5) t35 t41 t6 t63 t7 Pip2(5) GStarP3 t62 KdStarGStarP3kP3 KdStarGStarP3 t53 t52 t18.t20 t45.t61 t3 KdStarGStar/ t49.t51 t0.t12 GStarP3kP3 t2 Pip3 /t16 PtP2 t5 t17 KdStarGStarP3kStarP3 Pten(5) Gab 1(5) t4P3k(5) GP3 KdStarGStarP3kStarP2 \t23 t8 t9 KdStarGStarP3kStar t14/ t34 t21.t24 KdStarGStarP3k t10 Akt(5)

places: 31 trans:52 Discarding 1 transitions with rule Empty Transition effects. t59 DAG t27 t30 KdStarPg t43 KdStarPgStar t37 **t4**0 KdStarPgStarP2 KdStarGStarPgR3 t26



places: 31 trans:51 Post-Agglomerating place: KdStarGStarP3kP3 t59 DAG Enz(5) DAGE KdStarPgStar t30 t27 KdStarPgStarP2 t37 KdStarGStarPgStarP2 t43 KdStarPg KdStarGStarPgStar KdStarGStarPgStarR3P2 t40 t29 t60 KdStarGStarPgP\3 t28 KdStarGStarPgStarP3 t36 t53 KdStarGStarPg ****26 t42 t25 t52 t47 Pip2(5) t41 t32 t38 GStarPgP3 t48 t31 PtP2 t39 t49.t51 t18.t20 ±13 ±54.t57 t46 Pten(5) KdStar(5) t6 KdStarGStar₽3k₽3 t44 t7 KdStarGStarP3kStart63 Pip3 KdStarGStarP3kStarP3 KdStarGStarP3kStarP2 KdStarGStarP3 t62 t3 KdStarGStar t17 t0.t12 GStarP3 t45.¢61 /t16 t14 t15 GStarP3kP3 Gab1(5) t10 t34 GP3 t9 t4 P3k(5) KdStarGStarP3k t8

places: 31 trans:54 Post-Agglomerating place :KdStarGStarPg DAGE t58 KdStarGStarPgStar Enz(5) \$59 KdStarGStarPgStarP2 t33 t37 t35 PtP2 t60 t52 DAG KdStarPgStarP2 t36 Pten(5) t53 t28 KdStarGStarPgStarP3P2 t13 KdStarGStarP3kStar KdStarPgStar t29 t30 Pip2(5) KdStarGStarP3kStarP2 KdStarGStarPgStarP3 t41 t54.t57KdStarGStarPg t49.t51 t27 t18.t20.t17 t10 **£**40 t\18.t20.t16 t14 KdStarPg t18.t20.t7 Pip3 t32 t31 KdStarGStarPgP3 KdStarGStarP3kStarP3 KdStarGStarP3k t2 KdStarGStar t34 t26 t9 t6.t17 KdStarGStarP3 t23 KdStar(5) t8 t4/7 P3k(5) Pg(5) t48 ₹6.t16 t15\t1 t62 Gab\(\(1\)(5) t15.tZ GStarPgP3 t45.t**6**1 GP3 t15.t16 t6.t7 t44 t4 t5 t46 GStarP3 KdStarGStarP3kP3



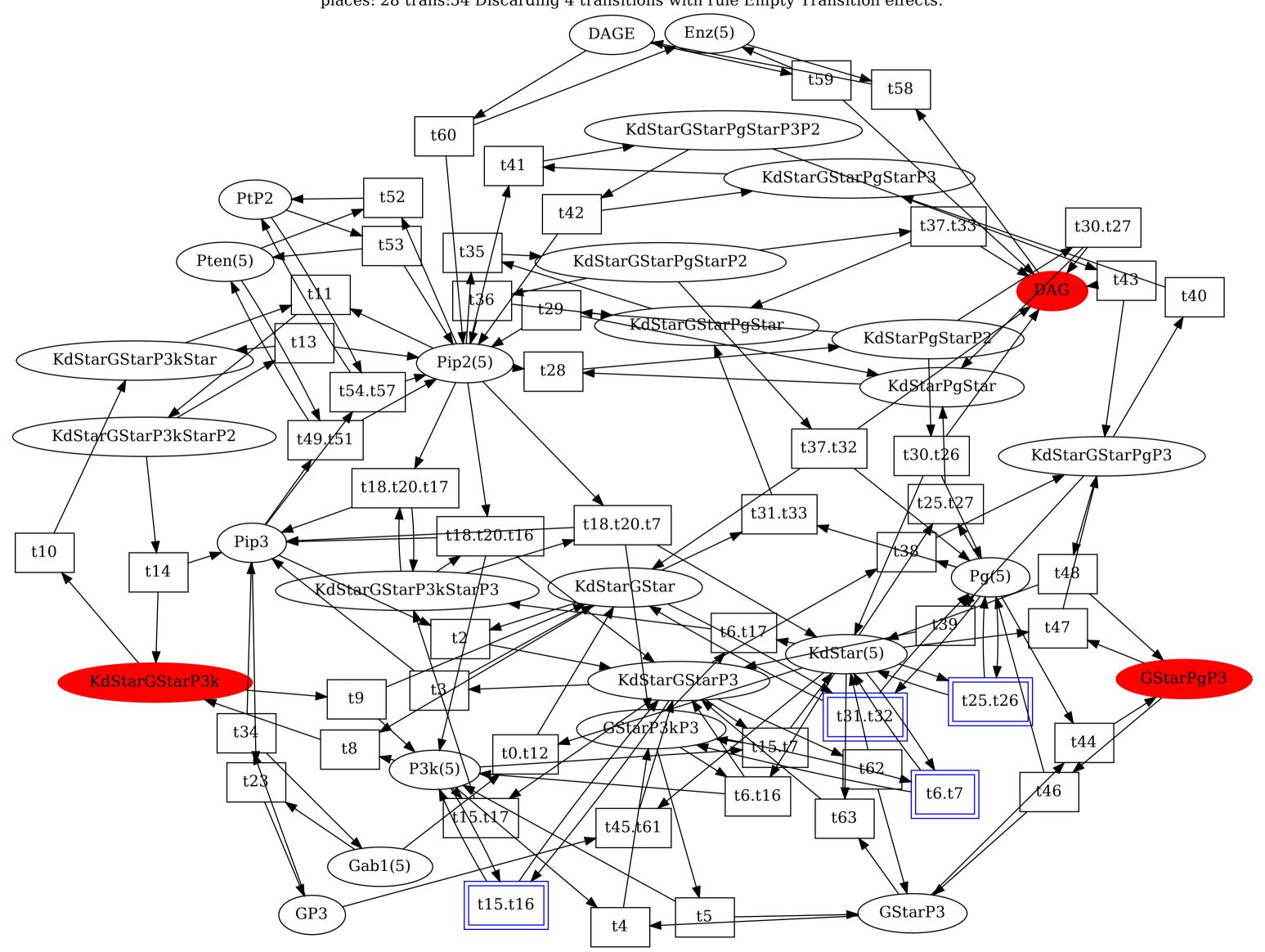
t15.t16

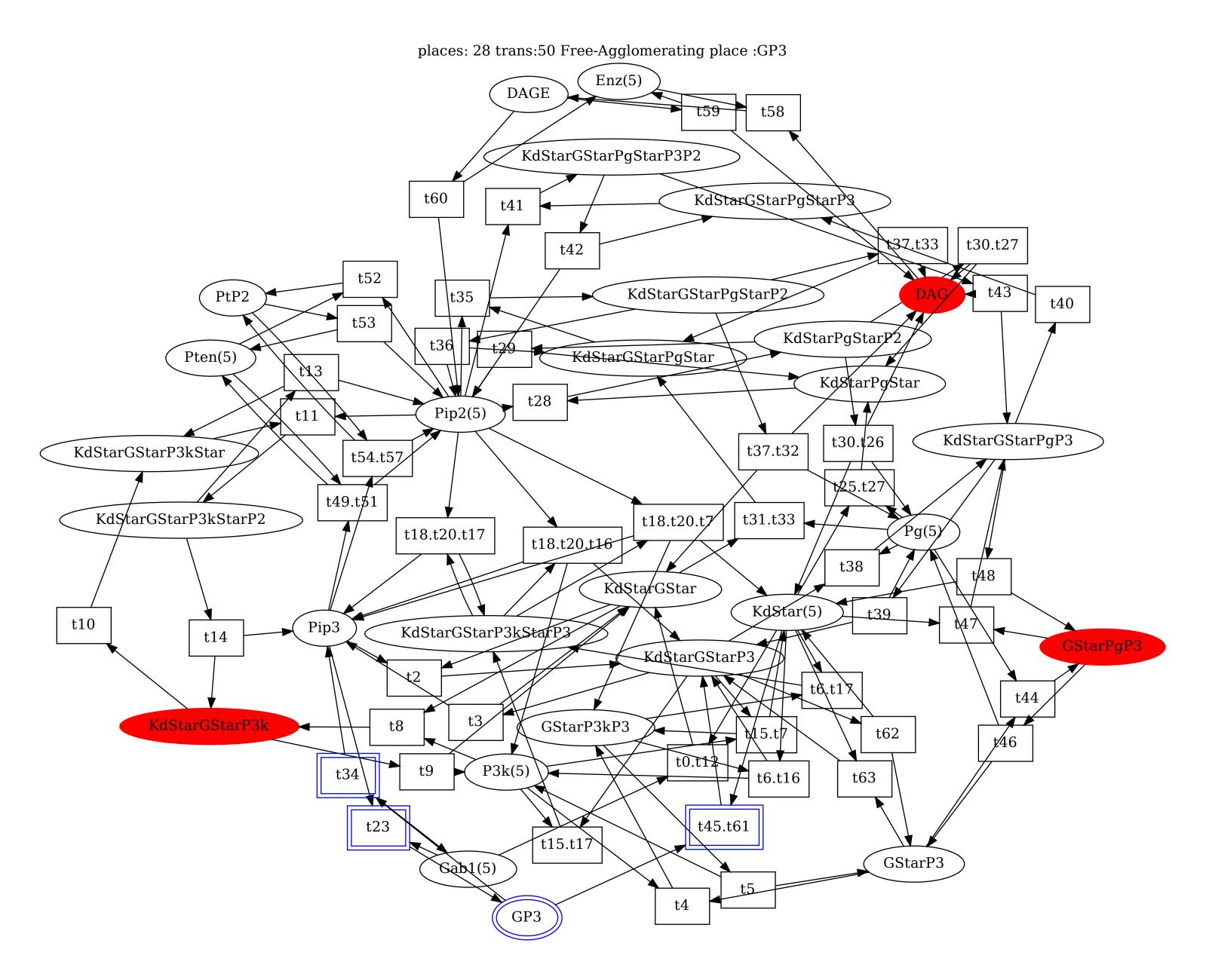
t4

GP3

GStarP3

places: 28 trans:54 Discarding 4 transitions with rule Empty Transition effects.





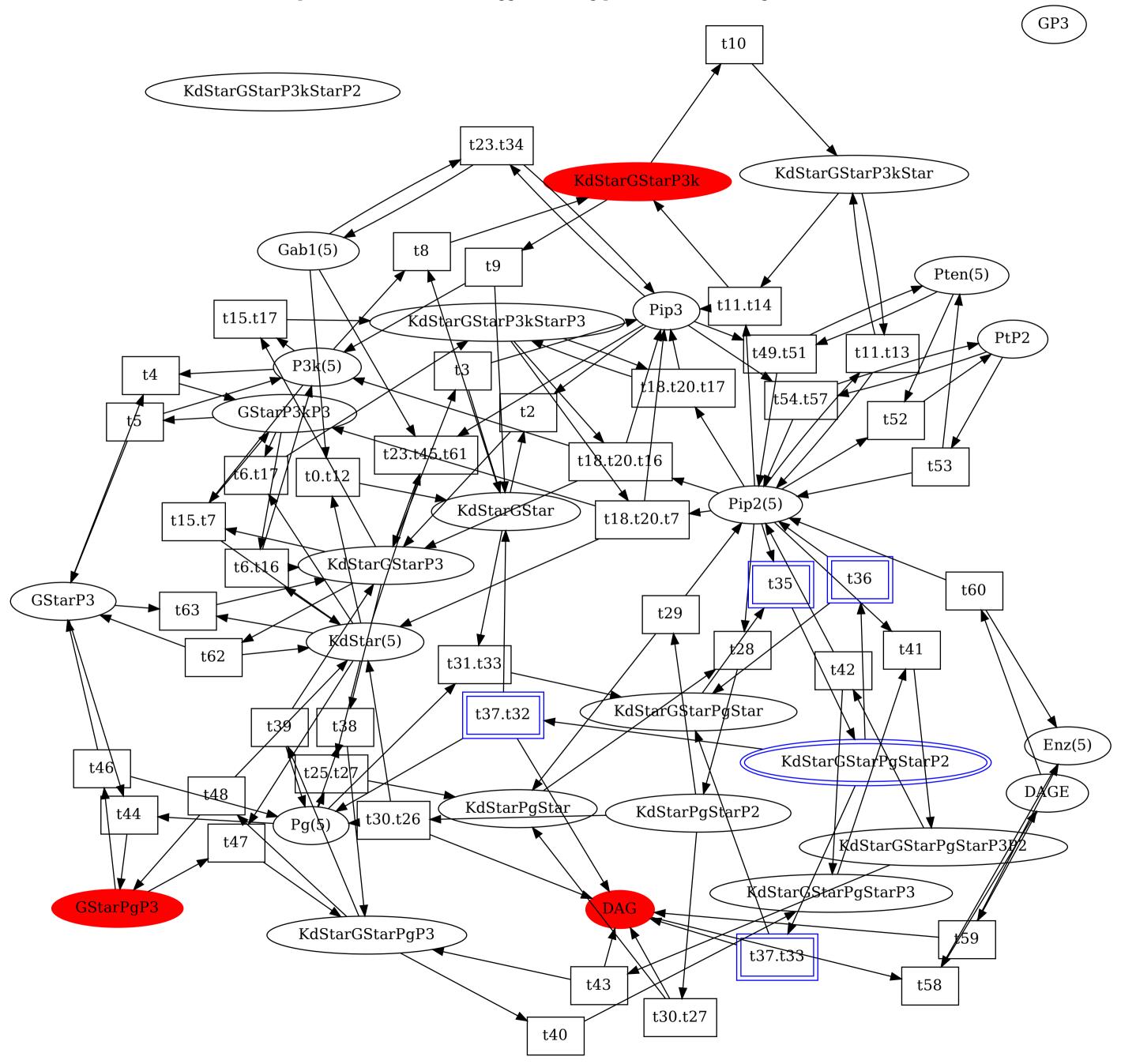
places: 28 trans:49 Free-Agglomerating place :KdStarGStarP3kStarP2 t59 Enz(5) t58 DAGE t30.t27 KdStarGStarPgStarP3 KdStarGStarPgStarP3P2 t40 GP3 t43\ t41 t60 Kd\StarPgStarP2 t42 KdStarGStarPgStarP2 KdStarPgStar KdStarGStarPgP3 t3|6 KdStarGStarPgStar t53 t30.t26 t35 t28 t52 Pten(5) t25.t27 t37.t32 Pip2(5) t48 \Pg(5) PtP2 GStarPgP3 t39 t31.t33 t47 t18.t20.t7 t49.t51 t]1 t38 t18.t20.t16 KdStar(5) t54.t57 t18.t20.t17 t46 KdStarGStarP3kStar Kd\$tarGStar KdStarGStarP3 t4\\ t62 KdStarGStarP3kStarP2 ∕t6.t17 Pip3 KdStarGStarP3kStarP3 t63 t15/t7 t3 t0.t12 t6.t16 GStarP3kP\$ t14 GStarP3 t9 P3k(5) t10 t4 t8 t23.t34

KdStarGStarP3k

t15.t17

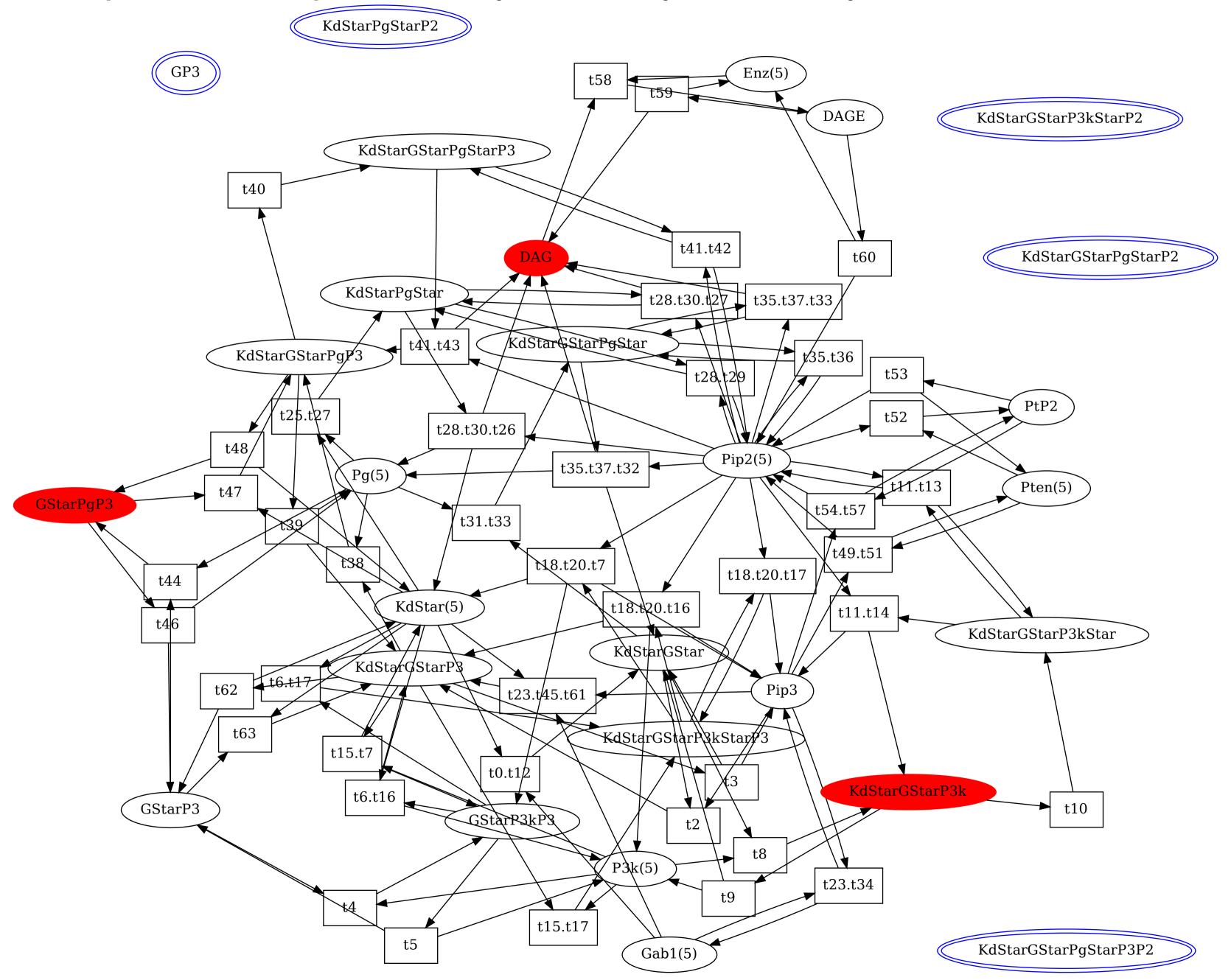
Gab1(5)

t5

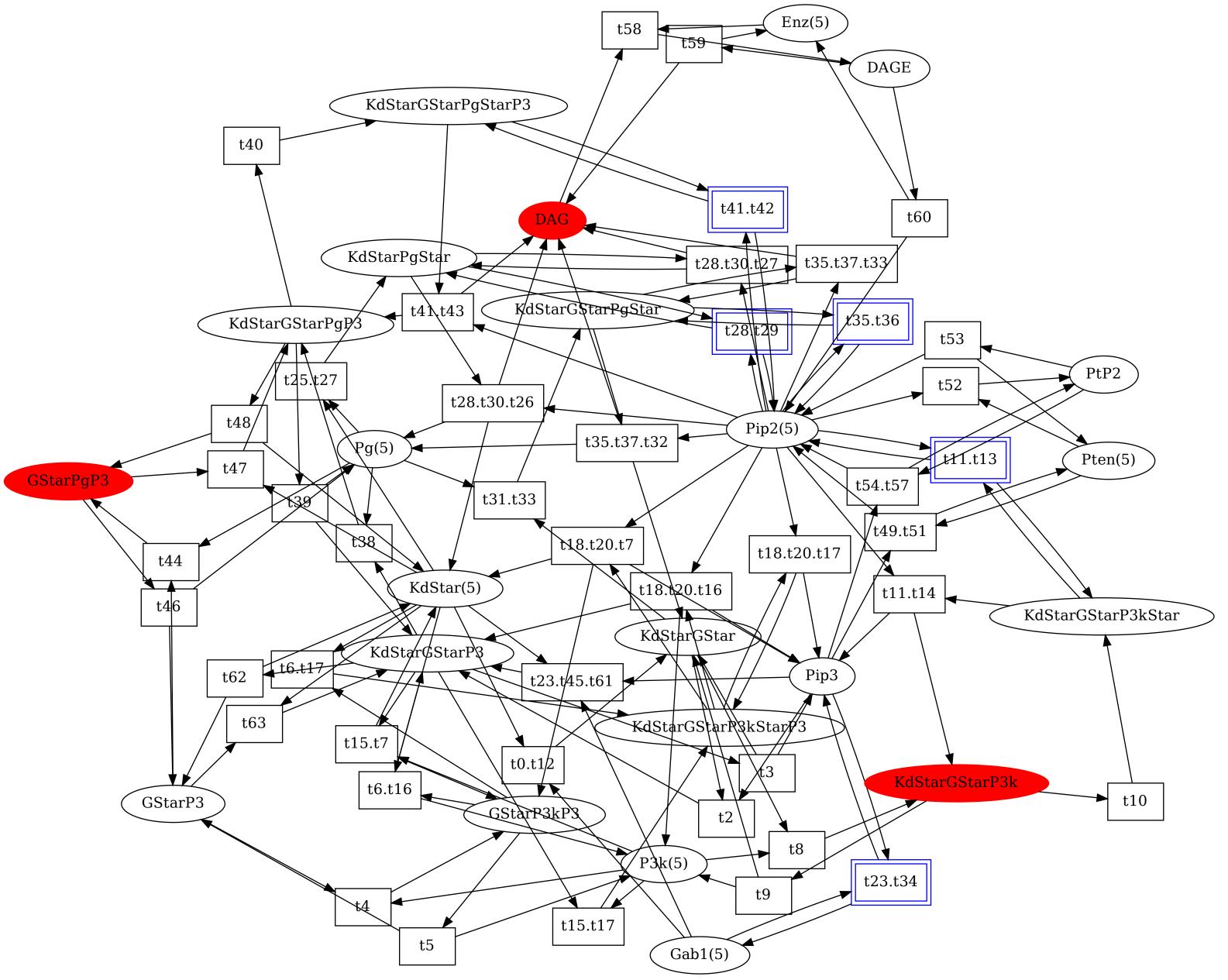


places: 28 trans:47 Free-Agglomerating place: KdStarGStarPgStarP3P2 DAGE KdStarGStarPgStarP2 Enz(5) KdStarGStarP3kStarP2 t59 t58 KdStarGStarPgStarP3P2 t60 PtP2 t42 t52 KdStarGStarPgStarP3 Pten(5) t53 t35,t36 t41 t35.t37.t33 t30.t27 .143 t29 t43 KdStarPgStarP t54.t57 KdStarGStarPgStar KdStarGStarP3kStar Pip2(5) t40 KdStarPgStar t49.t51 t35\t37.t32 t11.t14 t18.t20.t17 t30.t26 t10 KdStarGStarPgP3 t18.t20.t16 t18.t20.t7 Pip3 t31.t33 KdStarGStarP3k t25.t27 KdStarGStar Pg/(5) KdStarestarP3kStarP3 t38 t48 KdStar(5) t23.t45.t61 t39 t23.t34 t9 t47 KdStarGStarP3 t8 t0.t12 P3k(5) t44 GStarPgP3 t/6,t16 GStarP3kP3 t62 t46 Gab1(5) t15.t7 t63 t15.t1√ GP3 t4GStarP3

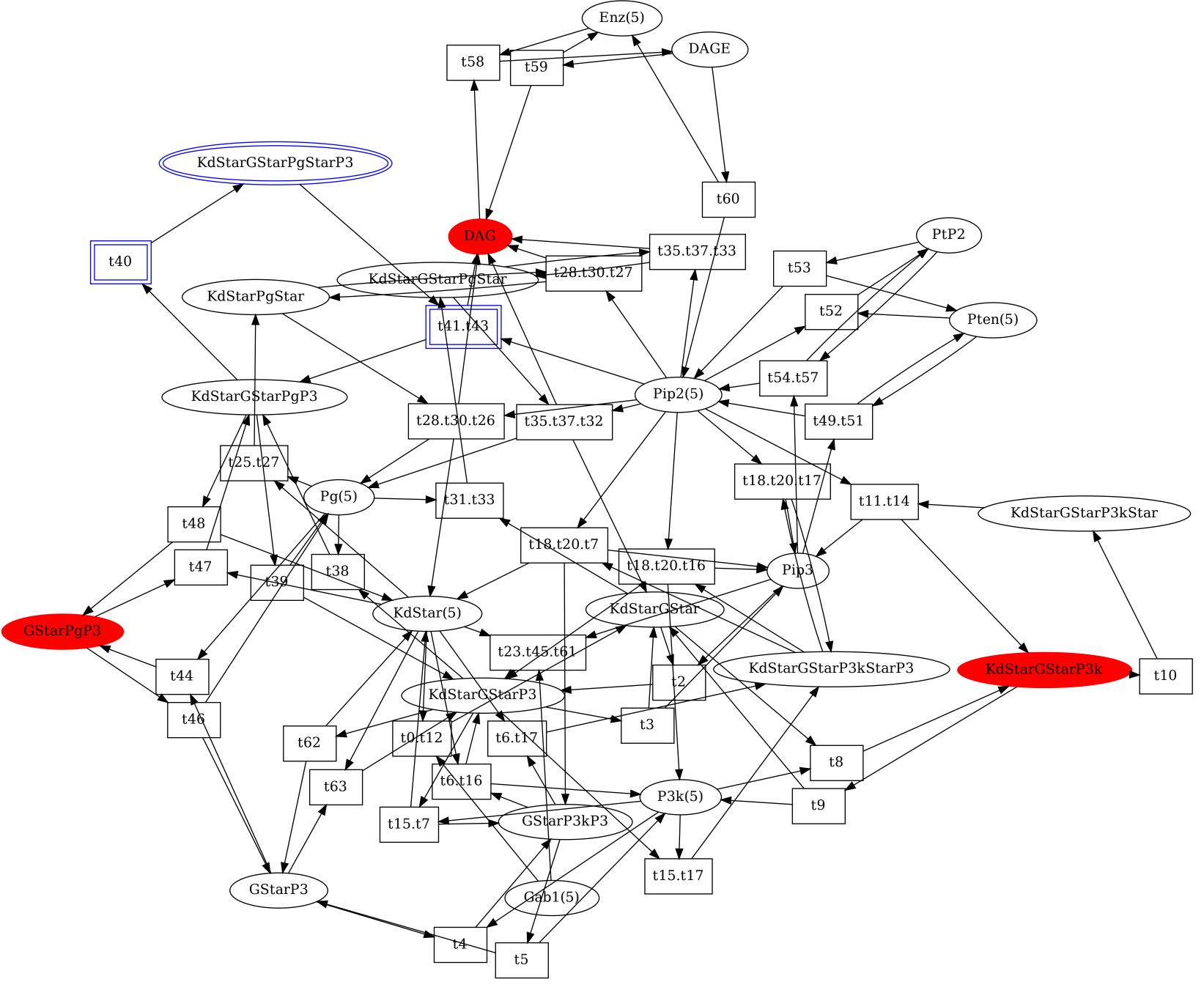
places: 28 trans:46 Free-Agglomerating place: KdStarPgStarP2 t40 t30.t27 GP3 KdStarGStarPg/StarP3 GStarPgP3 t58 KdStarPgStar t48 KdStarPgStarP2 KdStarGStarPgP3 t#9 t47 t25/t27 t30.t26 t44 $\operatorname{Enz}(5)$ £3<u>9</u> t**4**6 DAGE t29 t41.t43 Pg(5) t41.t42 t28 t63 t35.t37.t33 KdStar(5) t60 KdStarGStarPgStar <u>t35.t</u>37.t32 t62 GStarP3 t35.t36 t15.t7 Pip2(5) KdStarGStarP3 t1\$.t20.t7 t6.t16 t53 t18.t20.**t/**16 t23.t45.t61 t52 t \$\frac{1}{4}8.t20.t17 Kd/St/arGSta t54.t57 GStarP3kP3 ţ/5 KdStarGStarP3kStarP3 t49.t51 t4 PtP2 Pβk(5). Pip3 t2 t11.t14 \t3 t15.t17 KdStarGStarPgStarP2 Pten(5) Gab1(5) t8 t9 KdStarGStarP3kStarKdStarGStarP3kStarP2KdStarGStarP3k t23.t34 KdStarGStarPgStarP3P2t10



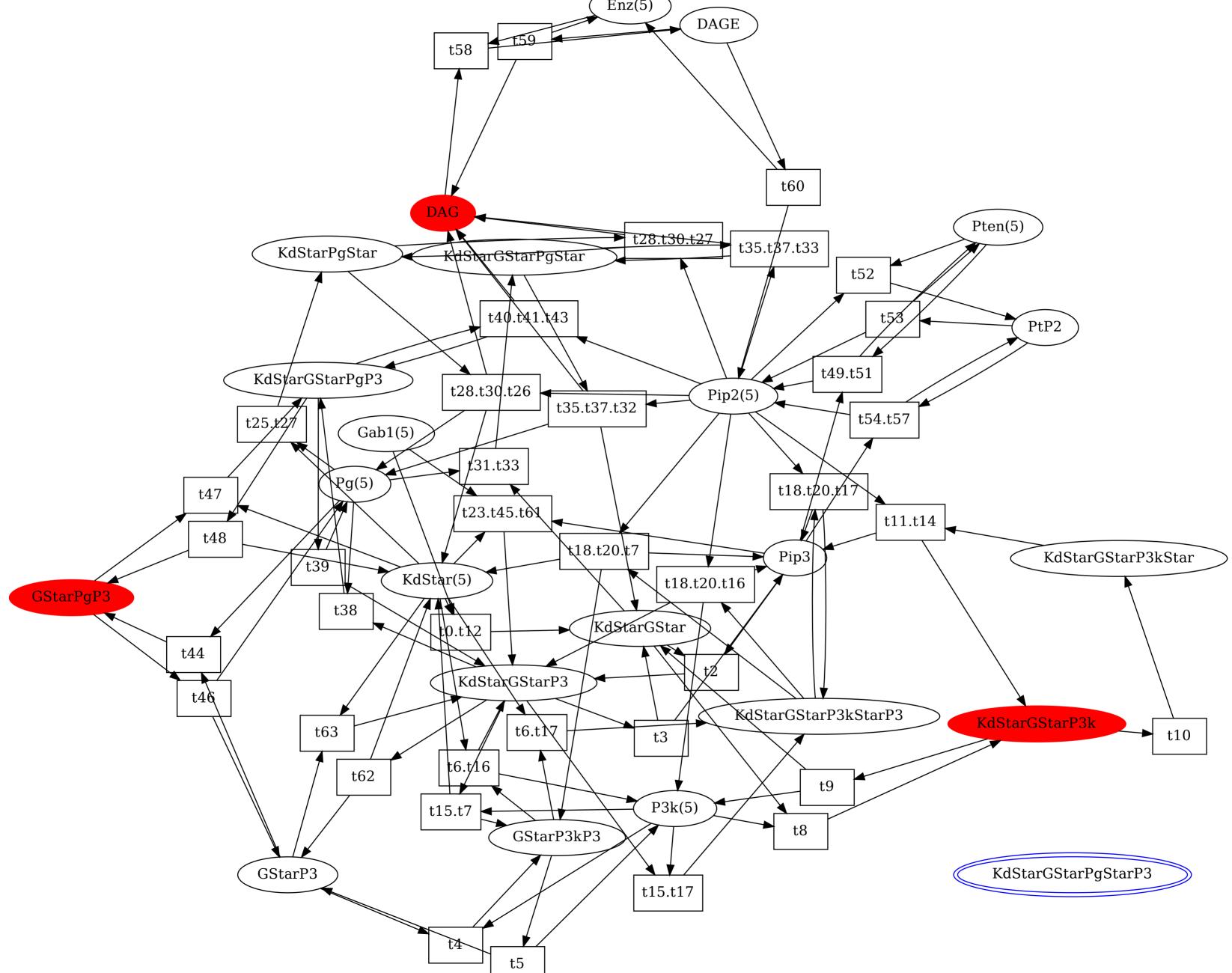
places: 23 trans:45 Discarding 5 transitions with rule Empty Transition effects.



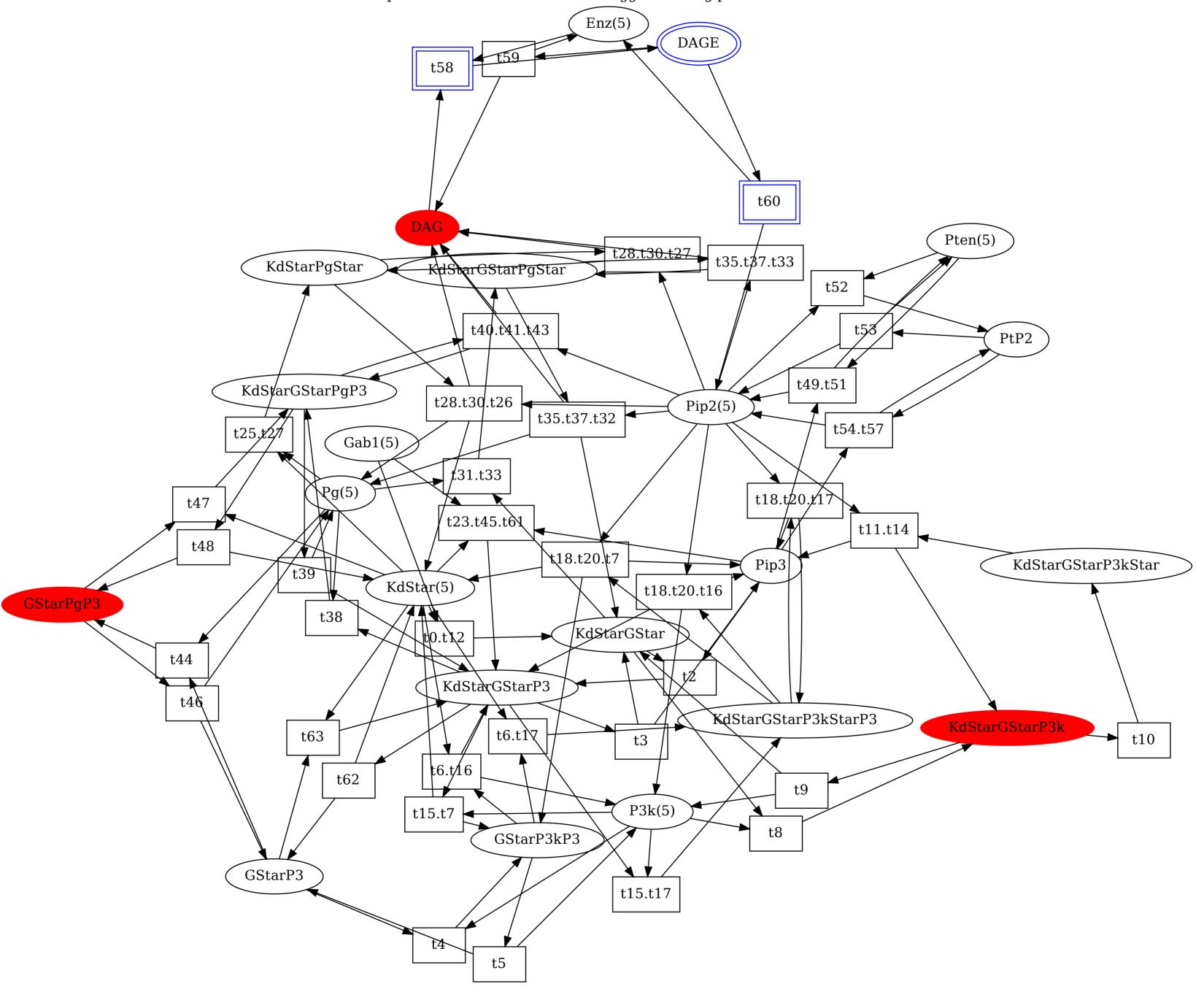
places: 23 trans:40 Free-Agglomerating place :KdStarGStarPgStarP3



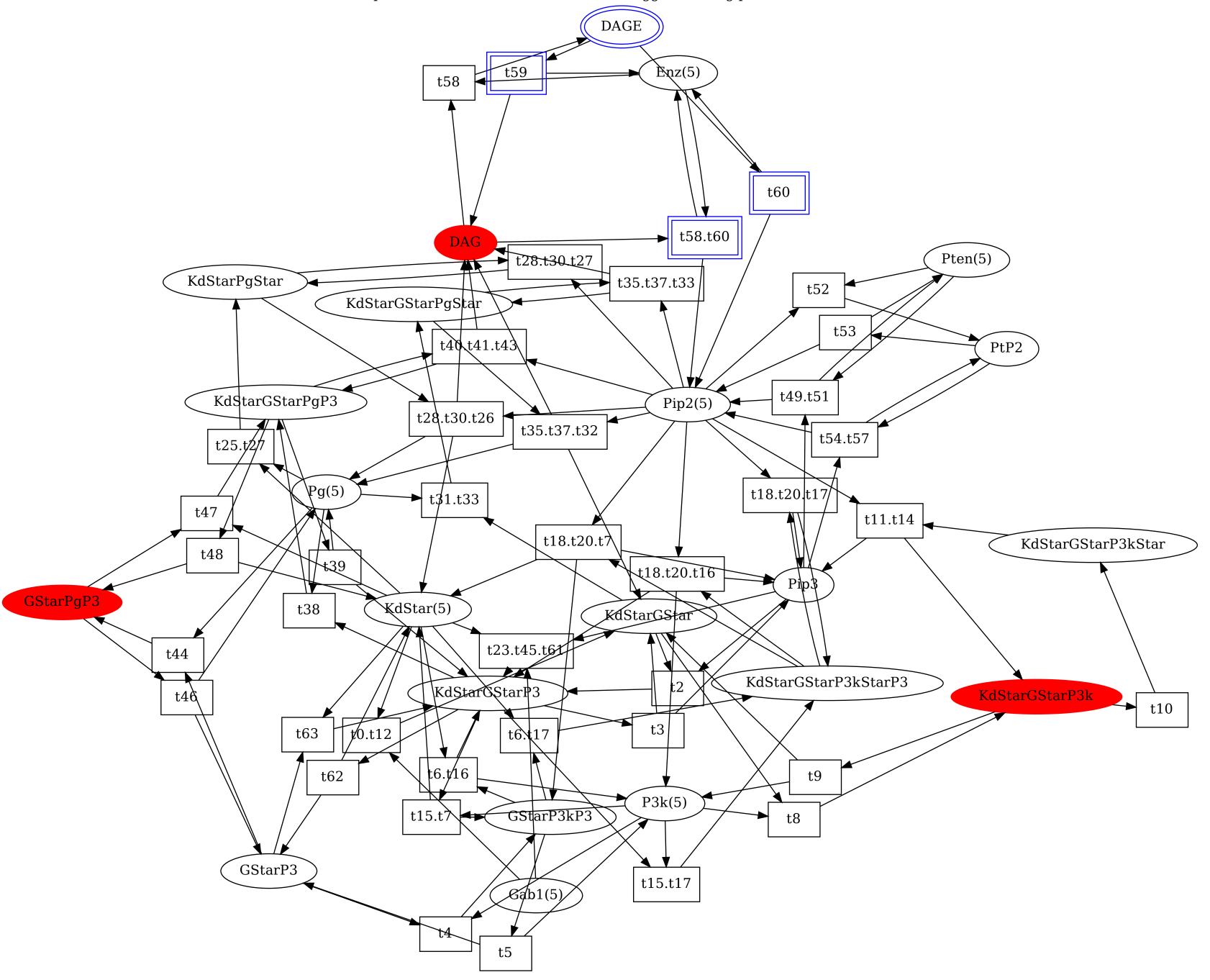
places: 23 trans:39 Constant places reduction[KdStarGStarPgStarP3] Enz(5) DAGE t58 t60 Pten(5) t28.t30.t27 t35.t**3**7.t33 KdStarGStarPgStar t52 t40.t41.t43 PtP2 t49.t51 t28.t30.t26 Pip2(5) t35.t37.t32 t54.t57 Gab1(5) £31.t33 **₽**g(5) t18.t20.x17 t23.t45.t61 t11.t14 \t18.t20.\t7 Pip3 KdStarGStarP3kStart39 KdStar(5) t18.t20.t16 t38 KdStarGStar tp.t12



places: 22 trans:39 Partial-Post-Agglomerating place :DAGE



places: 22 trans:40 After Partial-Post-Agglomerating place :DAGE



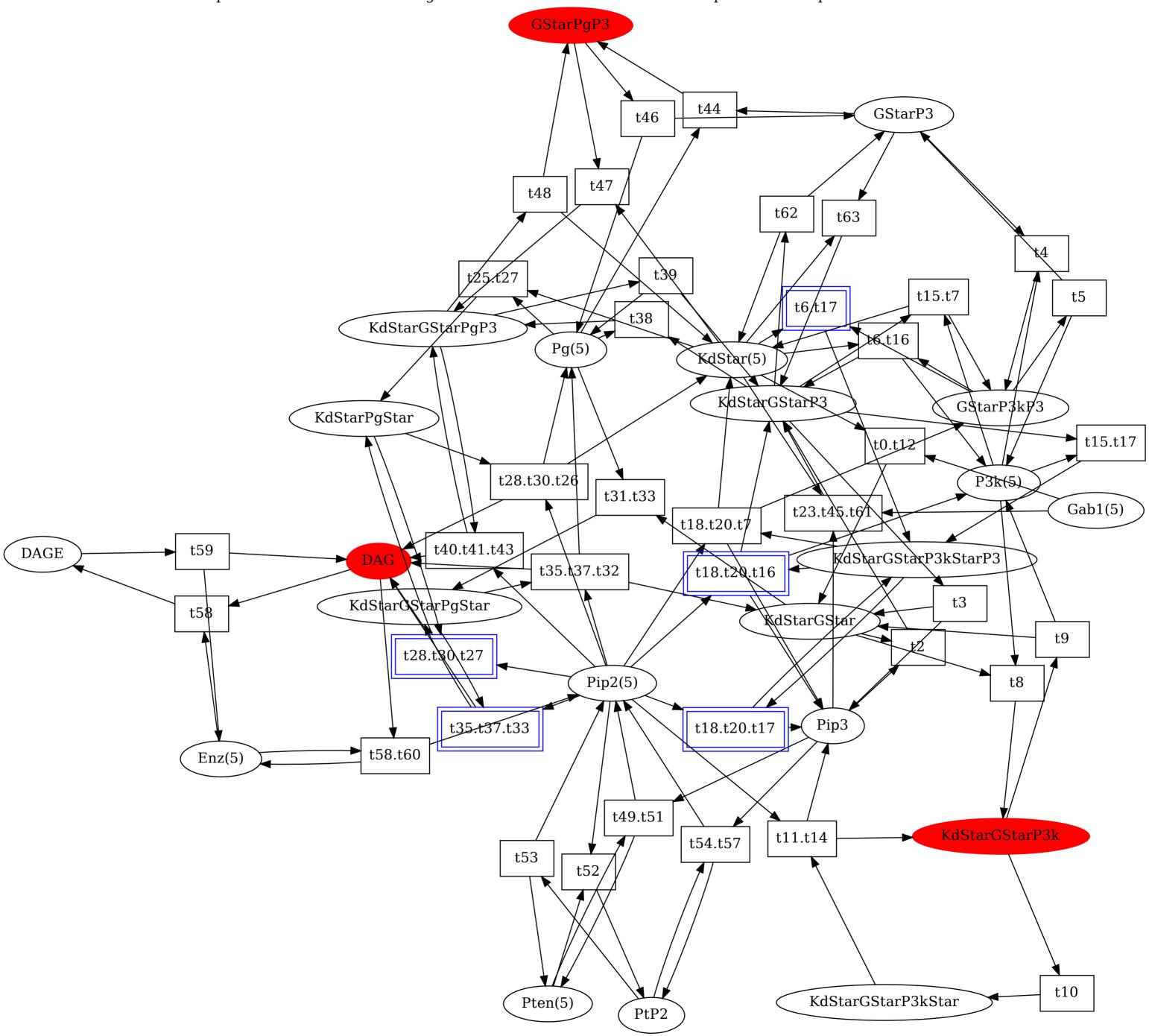
places: 22 trans:40 Discarding 1 transitions with rule Partial Post agglomeration DAGE Ænz(5) t59 t58 t60 **★** t58.t60 t28.t30.t27 Pten(5) KdStarPgStar t35.t37.t33 t52 KdStarGStarPg\$tar t53 t40.t41.t43 PtP2 t49.t51 KdStarGStarPgP3 Pip2(5) t28.t30.t26 t35.t37.t32 t54.t57 t25.t/2// \Pg(5) t18.t20 t17 t**3**1.t33 t47 t11.t14 t18.t20.t7 KdStarGStarP3kStar t48 t18.t20.t16 Pip3 KdStar(5) t38 KdStarGStar t23.t45.t6 KdStarGStarP3kStarP3 KdStar GStar 3 KdStarGStarP3kt4& t10 t3/ t63 #0.t12 t6.t. 7 t6.t/16 t62 t9 P3k(5) t15.tX GStarP3 t15.t17 **La**b1(5)

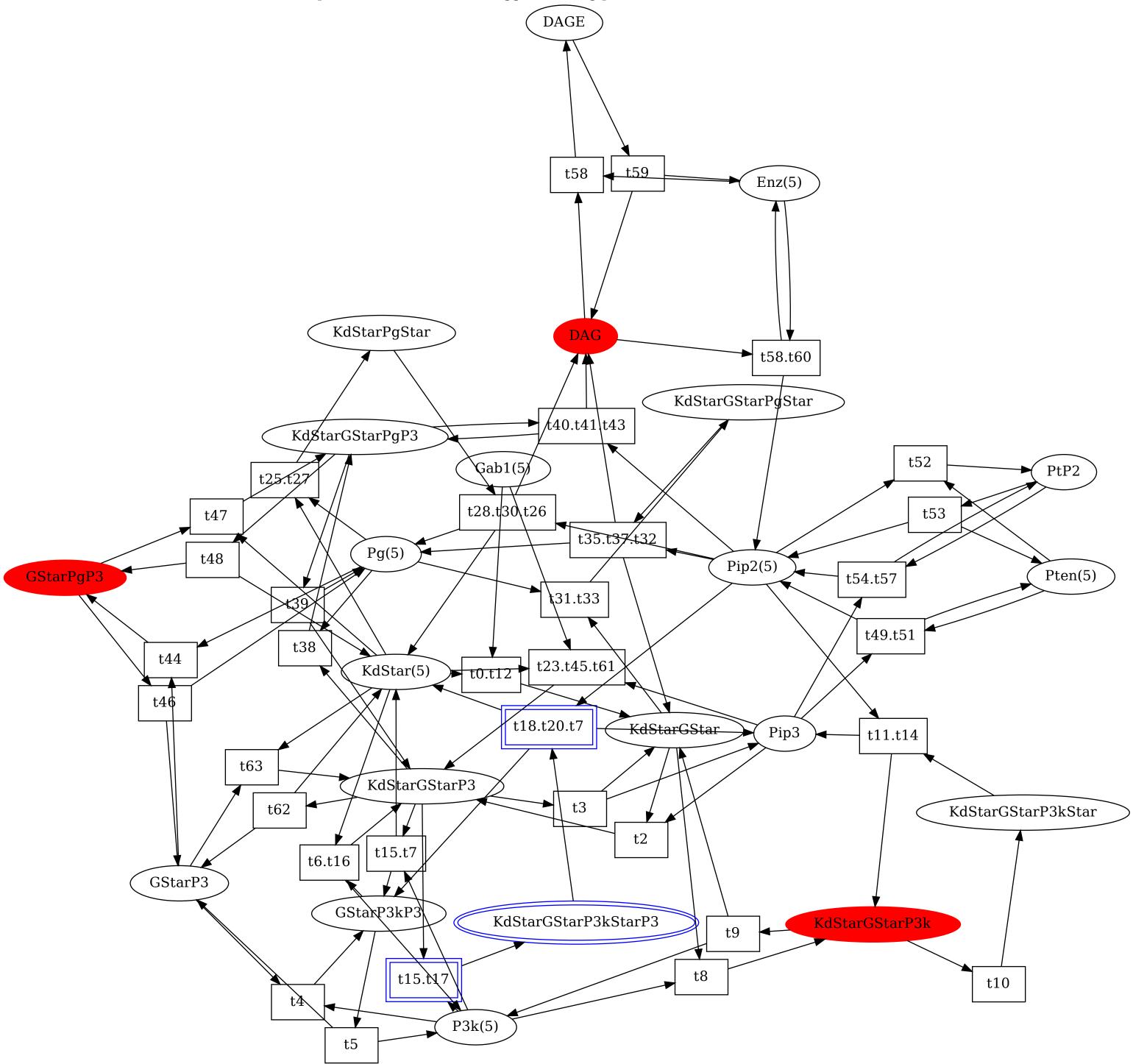
t5

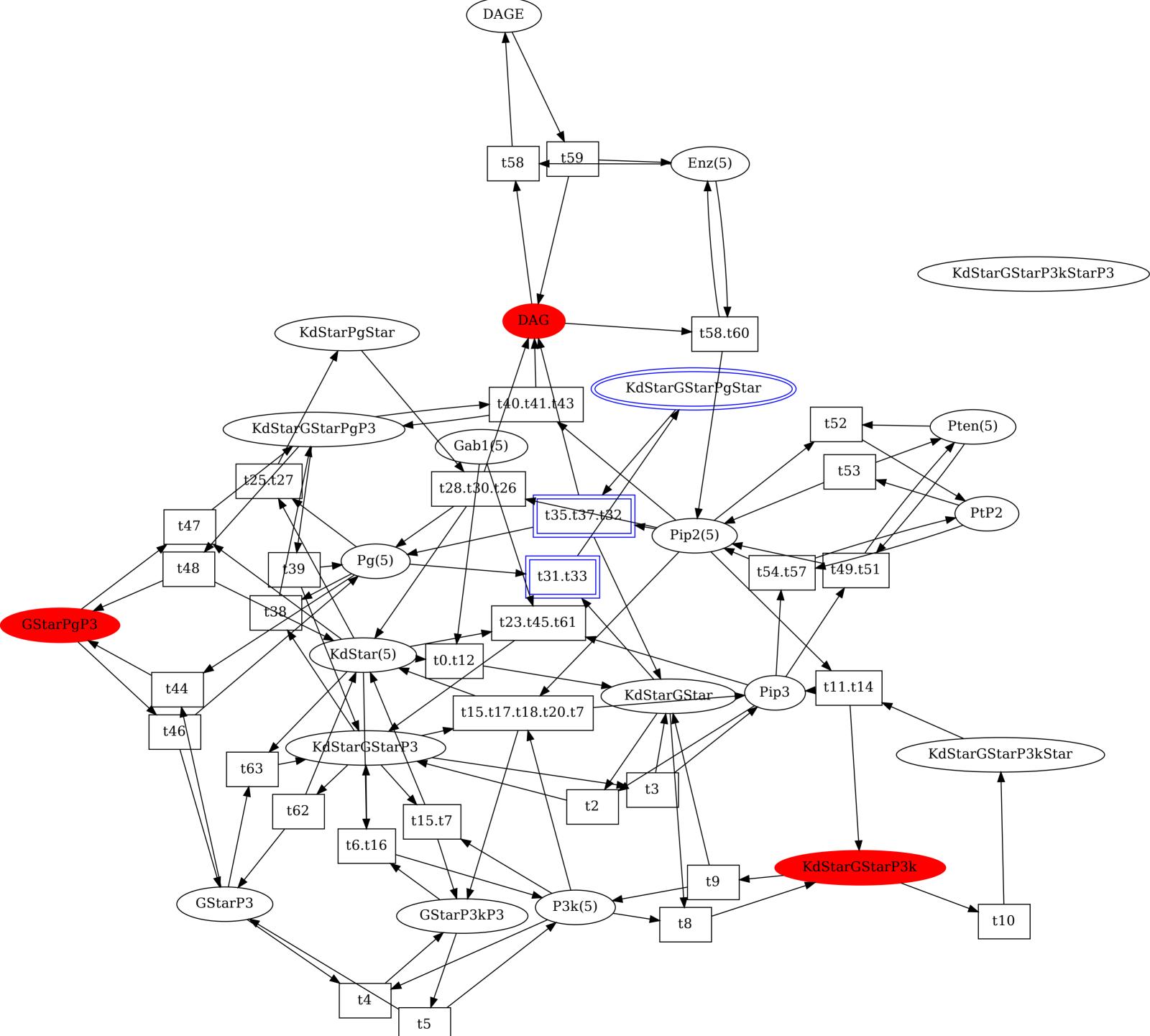
GStarPgP3

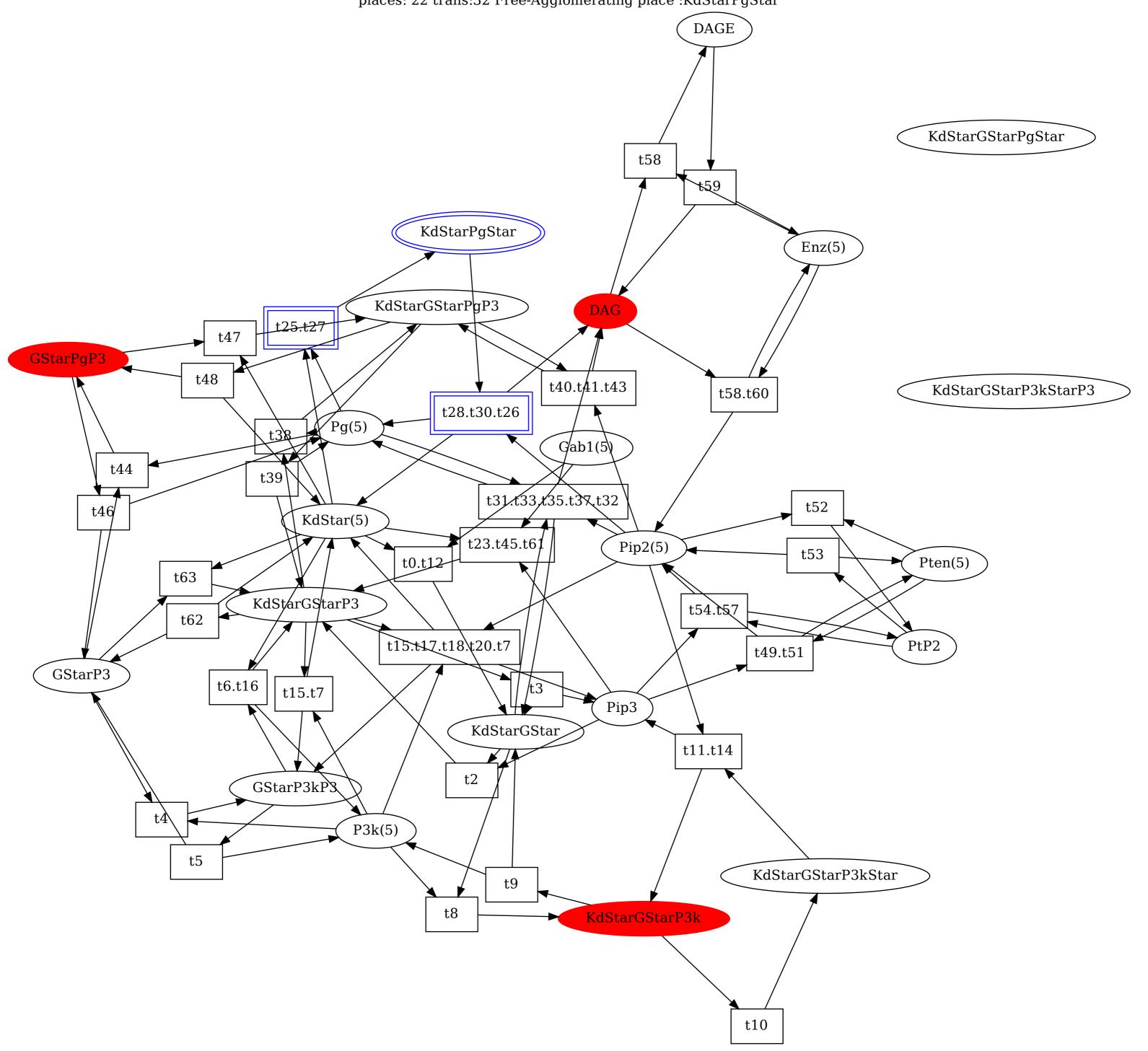
t44

places: 22 trans:39 Discarding 5 transitions with rule Redundant composition of simpler transitions.







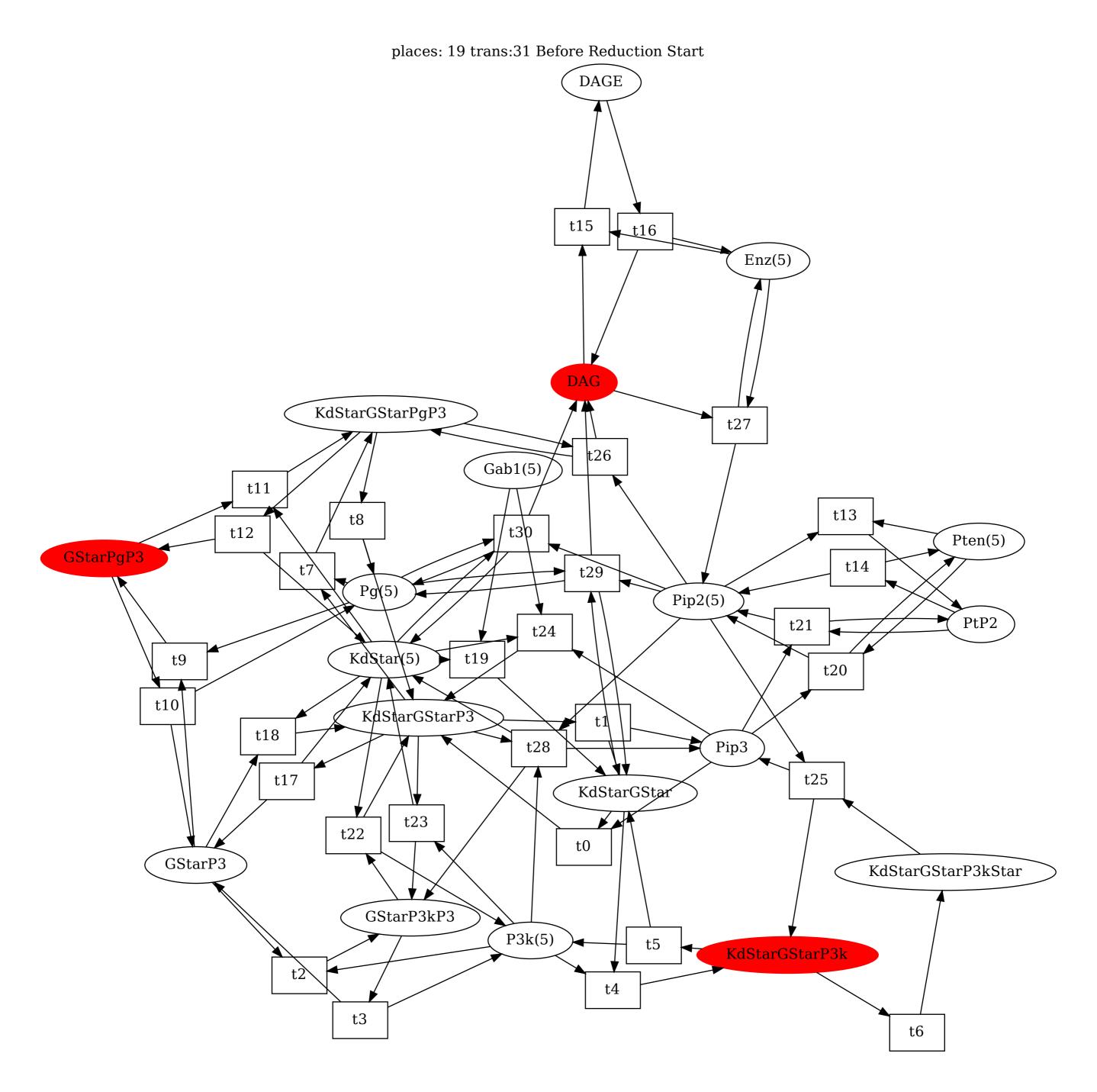


t10

GStarPgP3

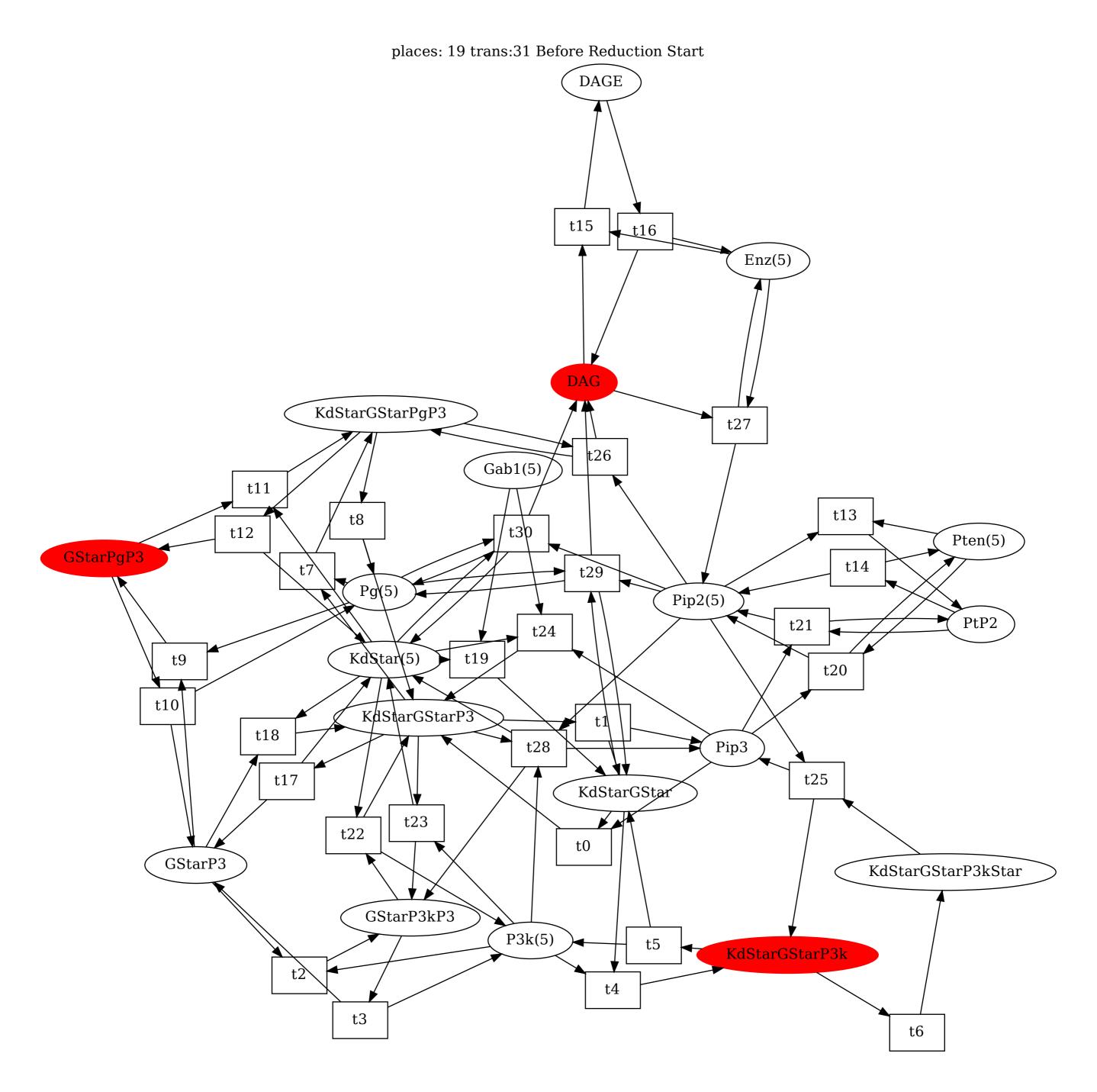
places: 19 trans:31 At convergence for reductions without SMT. DAGE t58 <u>t5</u>9 Enz(5) DAG KdStarGStarPgP3 t58.t60 t40.t41.t43 Gab1(5) t47 t52 t39 t25.t2/7.t2/8.t30.t26 t48 Pten(5) GStarPgP3 t53 t31.t33.t35.t37.t32 $P_{\mathfrak{g}}(5)$ Pip2(5) PtP2 t54.t57 t23.t45.t61 KdStar(5) t0.t12 t44 t49.t51 t46 KdStarGStarP3 t3` t63 Pip3 t15.t17.t18.t20.t7 t62 t11.t14 KdStarGStar t15.t7 t6.t16 t2 GStarP3 KdStarGStarP3kStar GStarP3kP3 P3k(5) t9 KdStarGStarP3kt4 t8 t5 t10

places: 19 trans:31 Simplifying constants used in the logic. DAGE t58 <u>t</u>59 Enz(5) DAG KdStarGStarPgP3 t58.t60 t40.t41.t43 Gab1(5) t47 t52 t39 t25.t2/7.t2/8.t30.t26 t48 Pten(5) GStarPgP3 t53 t31.t33.t35.t37.t32 Pg(5) Pip2(5) PtP2 t54.t57 t23.t45.t61 KdStar(5) t0.t12 t44 t49.t51 t46 KdStarGStarP3 t3` t63 Pip3 t15.t17.t18.t20.t7 t62 t11.t14 KdStarGStar t15.t7 t6.t16 t2 GStarP3 KdStarGStarP3kStar GStarP3kP3 P3k(5) t9 KdStarGStarP3kt4 t8 t5 t10

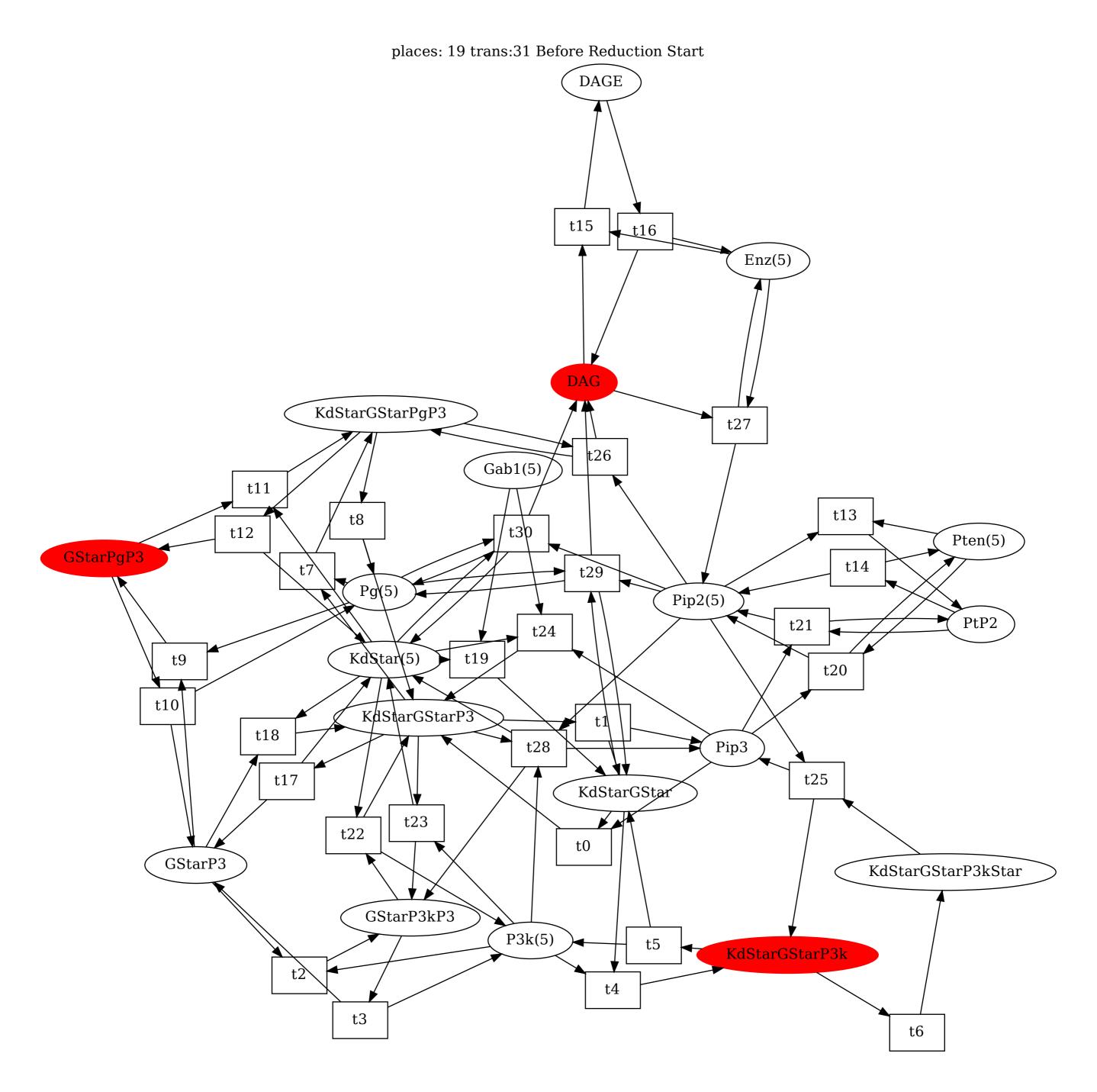


places: 19 trans:31 At convergence for reductions without SMT. DAGE t15 <u>t1</u>6 Enz(5) DAG KdStarGStarPgP3 t27 t26 Gab1(5) t11 t13 t8 t12 Pten(5) GStarPgP3 t14 t29 Pg(5) Pip2(5) PtP2 t21 t24 KdStar(5) t19 t9 t20 t10 KdStarGStarP3 t18 Pip3 t28 t17 t25 KdStarGStar t23 t22 t0 GStarP3 KdStarGStarP3kStar GStarP3kP3 P3k(5) t5 KdStarGStarP3k t2 t4 t3 t6

places: 19 trans:31 Simplifying constants used in the logic. DAGE t15 <u>t1</u>6 Enz(5) DAG KdStarGStarPgP3 t27 t26 Gab1(5) t11 t13 t8 t12 Pten(5) GStarPgP3 t14 t29 Pg(5) Pip2(5) PtP2 t21 t24 KdStar(5) t19 t9 t20 t10 KdStarGStarP3 t18 Pip3 t28 t17 t25 KdStarGStar t23 t22 t0 GStarP3 KdStarGStarP3kStar GStarP3kP3 P3k(5) t5 KdStarGStarP3k t2 t4 t3 t6

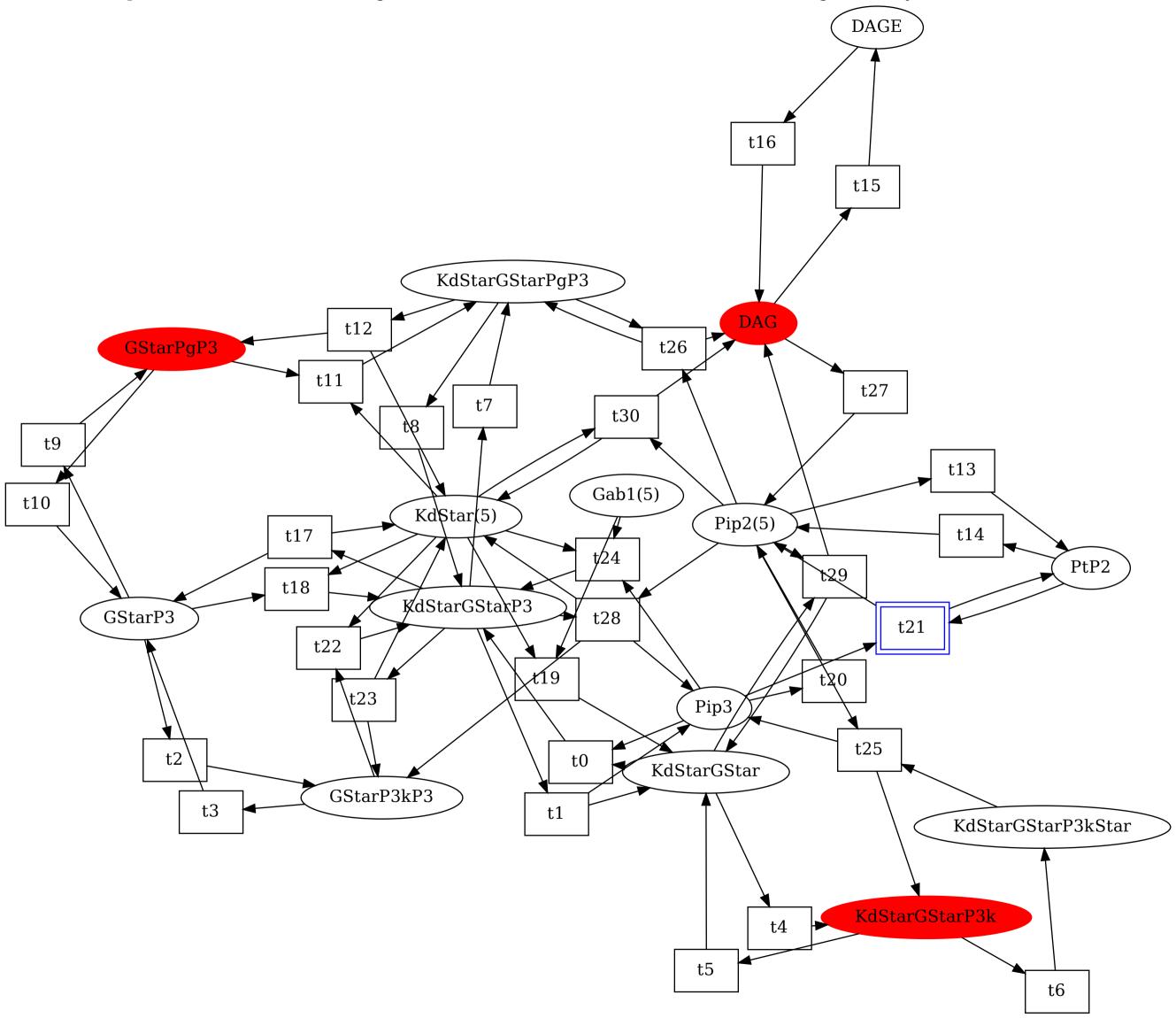


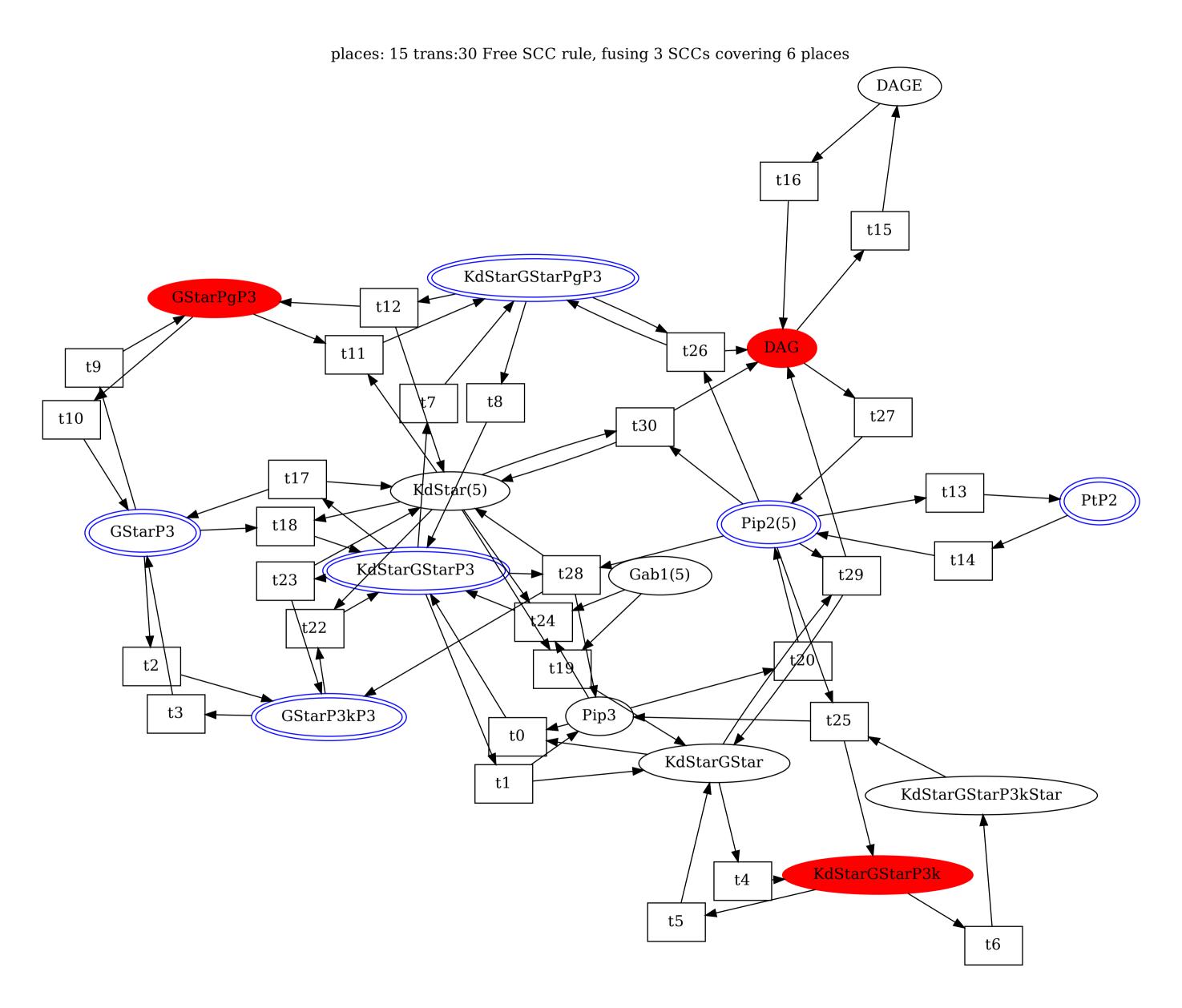
places: 19 trans:31 At convergence for reductions without SMT. DAGE t15 <u>t1</u>6 Enz(5) DAG KdStarGStarPgP3 t27 t26 Gab1(5) t11 t13 t8 t12 Pten(5) GStarPgP3 t14 t29 Pg(5) Pip2(5) PtP2 t21 t24 KdStar(5) t19 t9 t20 t10 KdStarGStarP3 t18 Pip3 t28 t17 t25 KdStarGStar t23 t22 t0 GStarP3 KdStarGStarP3kStar GStarP3kP3 P3k(5) t5 KdStarGStarP3k t2 t4 t3 t6

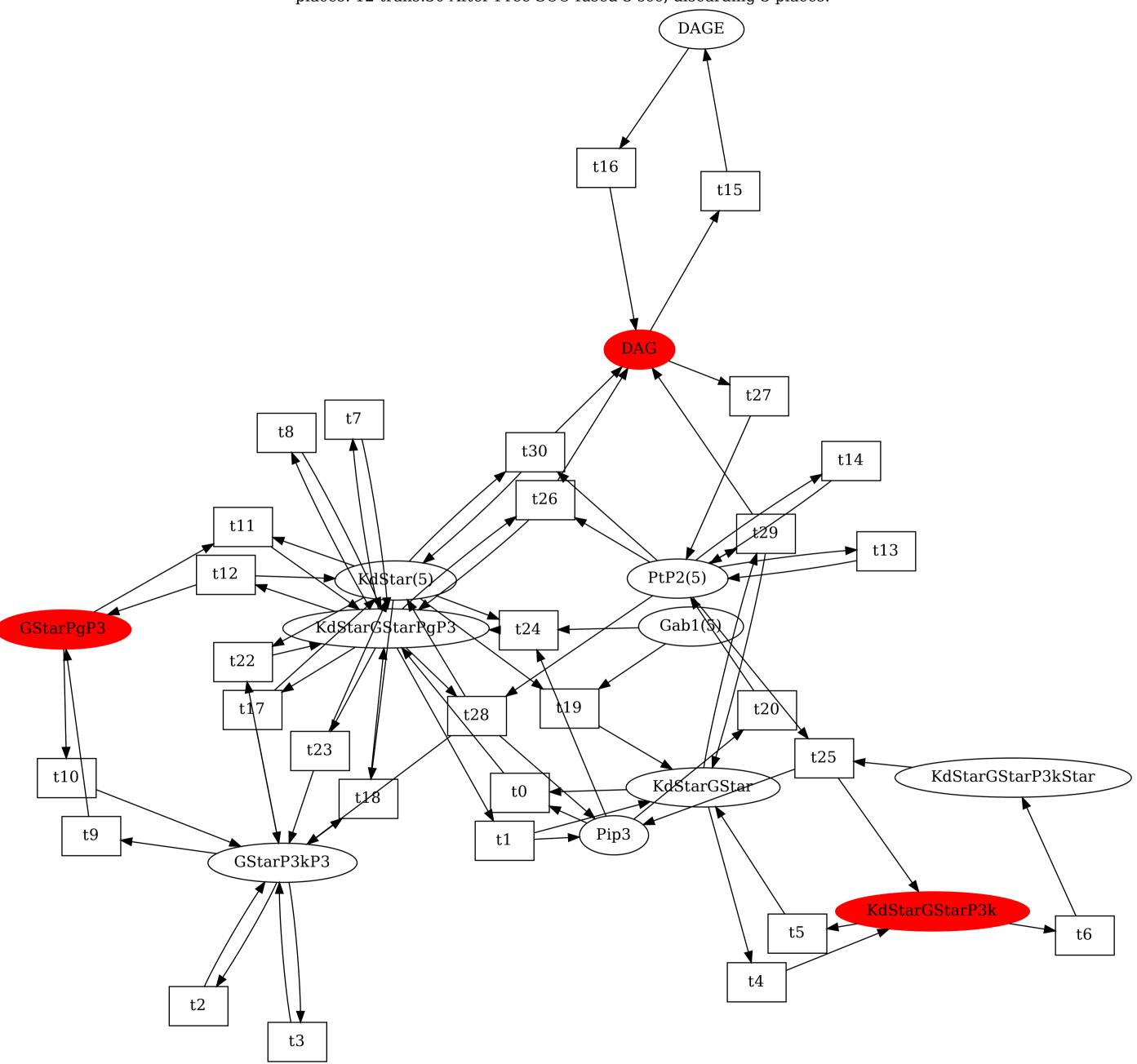


places: 19 trans:31 At convergence for reductions without SMT. DAGE t15 <u>t1</u>6 Enz(5) DAG KdStarGStarPgP3 t27 t26 Gab1(5) t11 t13 t8 t12 Pten(5) GStarPgP3 t14 t29 Pg(5) Pip2(5) PtP2 t21 t24 KdStar(5) t19 t9 t20 t10 KdStarGStarP3 t18 Pip3 t28 t17 t25 KdStarGStar t23 t22 t0 GStarP3 KdStarGStarP3kStar GStarP3kP3 P3k(5) t5 KdStarGStarP3k t2 t4 t3 t6

places: 15 trans:31 Discarding 1 transitions with rule Redundant Transitions using SMT only with invariants







GStarPgP3

t10\

t9

