



IBM Software Group

TPF Users Group Spring 2007

Time Slice Enhancements in z/TPF

Controlling cycle intensive programs

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Venue : Applications Subcommittee

AIM Enterprise Platform Software

IBM z/Transaction Processing Facility Enterprise Edition 1.1.0

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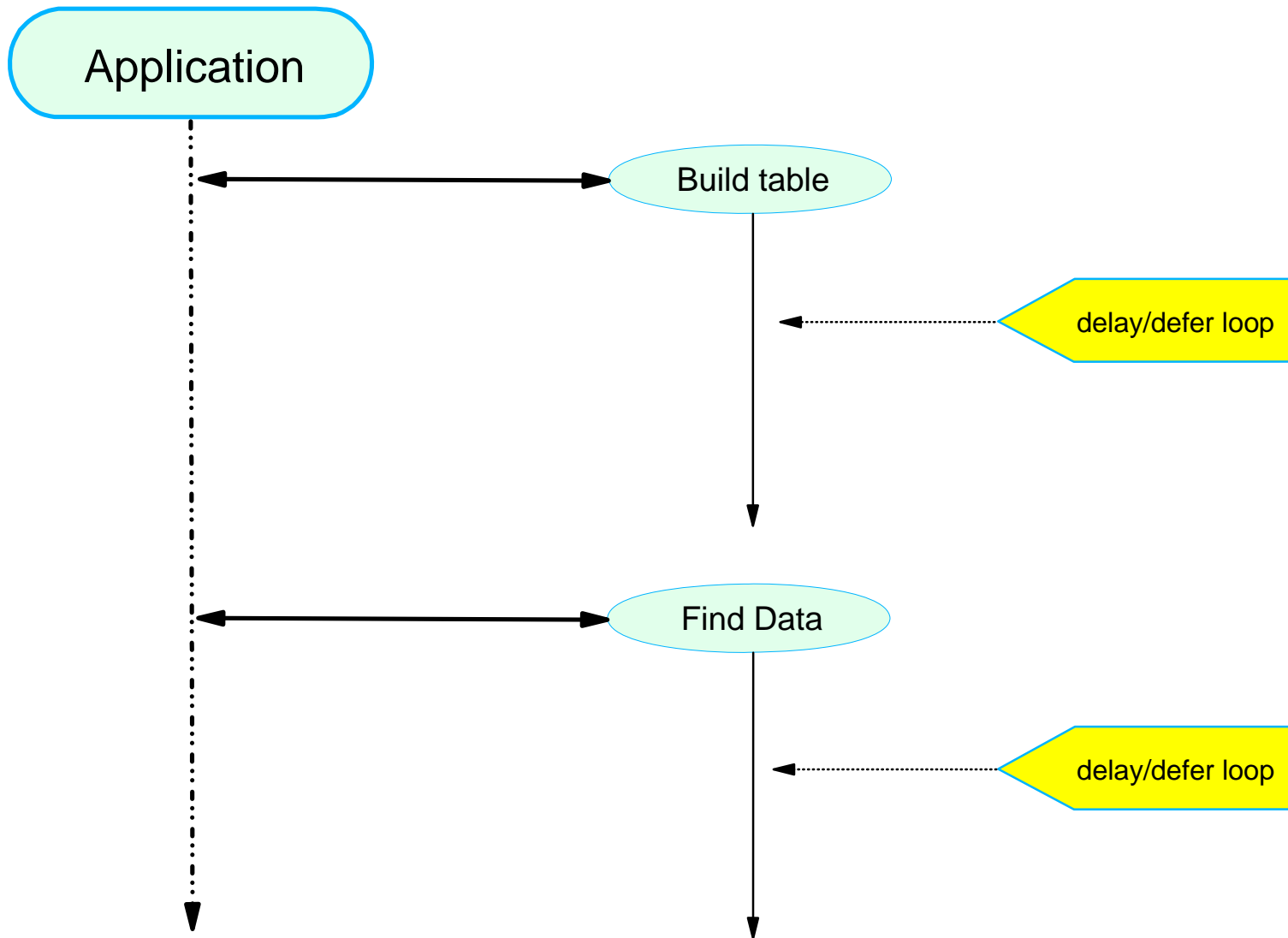
Agenda

- History - Problem being solved
- TPF4.1 Support and Control
- z/TPF Support and Control

Problem being solved

- TPFUG task force to determine requirements for ECB resource control and monitoring.
 - ▶ Relieve CTL-10 issues
 - ▶ Allow cycle intensive programs to run and not impact system performance

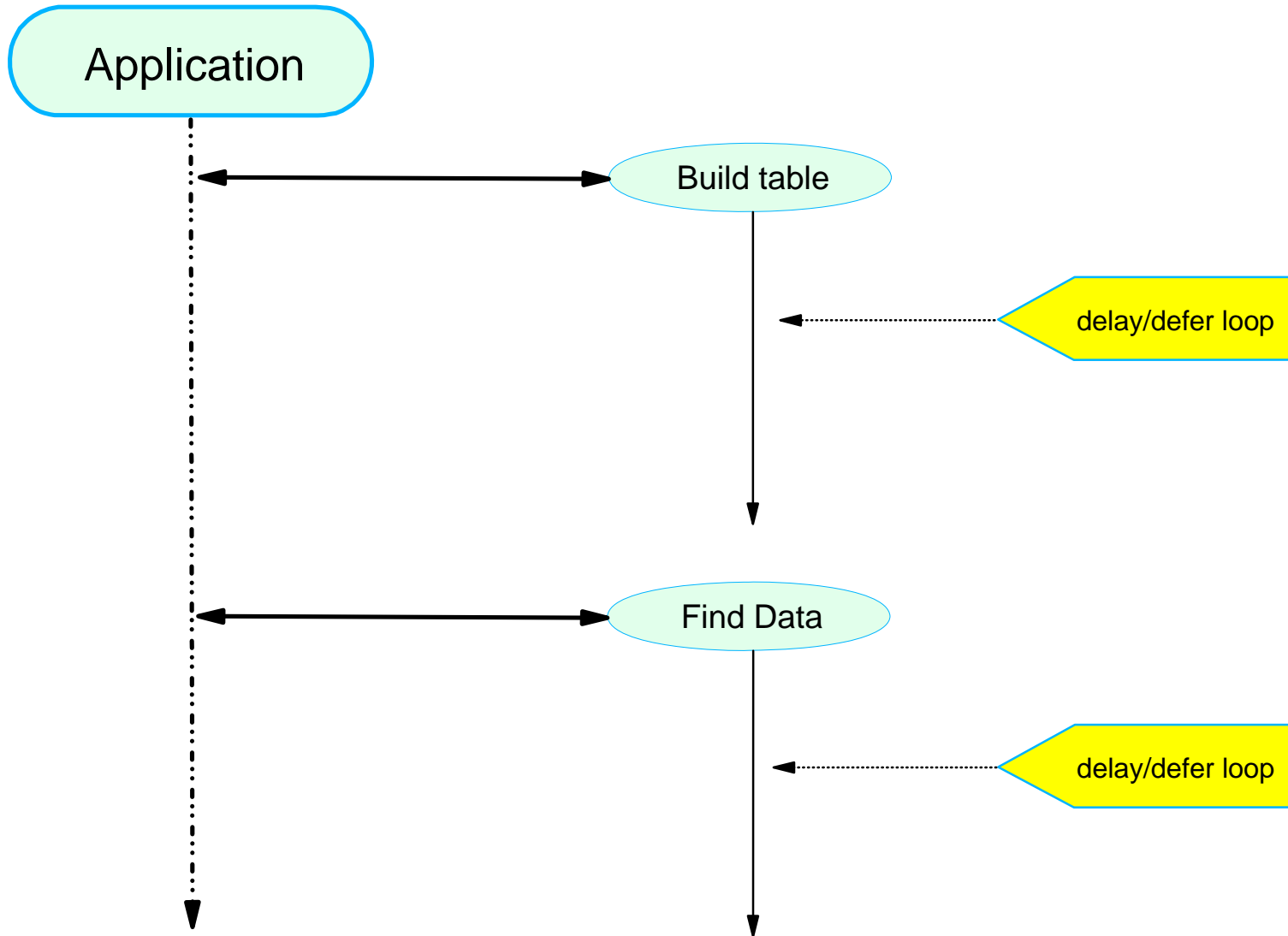
Problem example



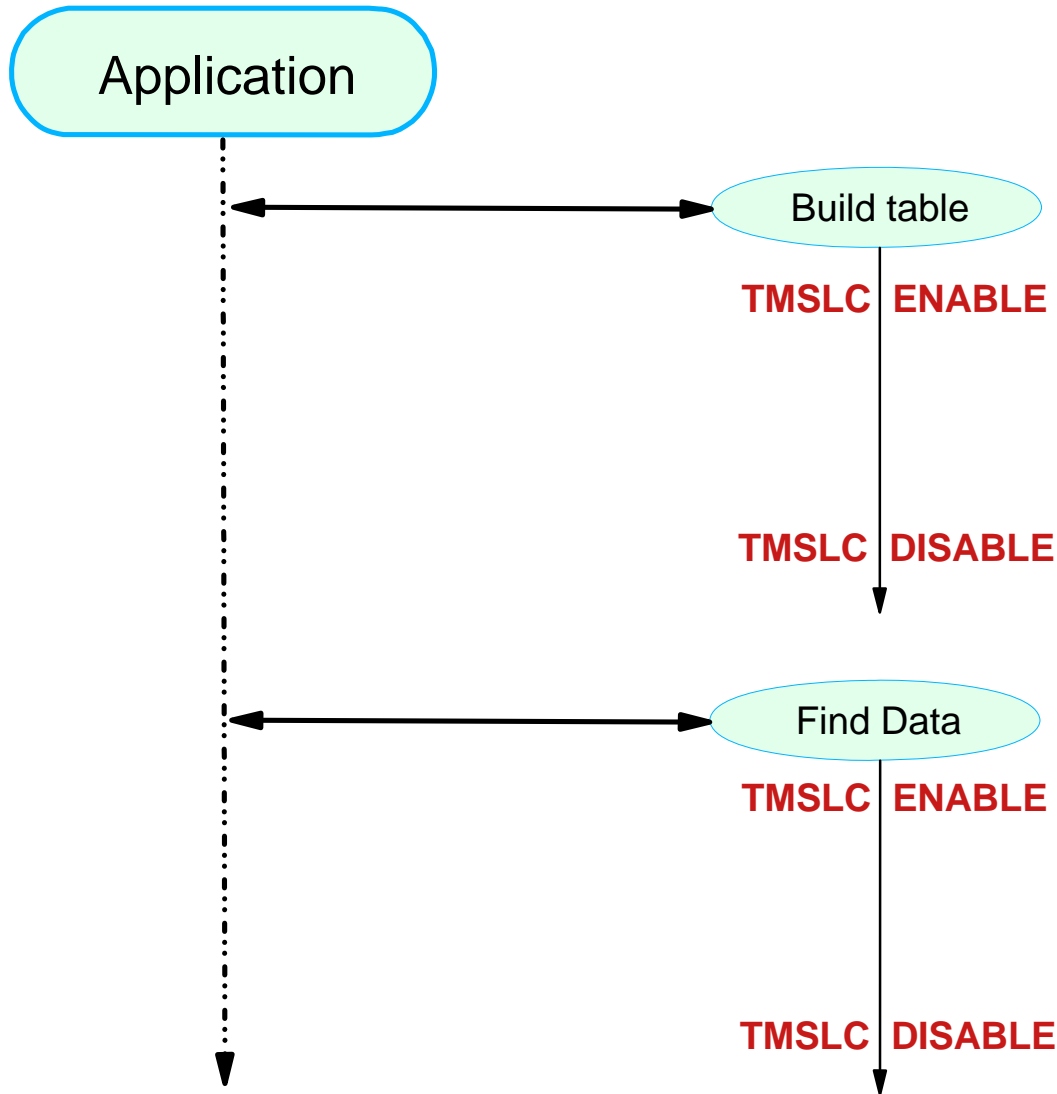
TPF4.1 Support and control

- CTL-10 avoidance
 - ▶ Program name list within the CP
 - ▶ SETOC function sets number of CTL-10s to avoid
- Support cycle intensive programs
 - ▶ TMSLC function enables program time slicing
 - ◆ RUNTIME - defines size of time-slice
 - ◆ MINSUSP - defines minimum suspend time
 - ◆ MAXTIME - defines maximum execution time
 - ◆ Environment is routine scope'd
 - ◆ Many restrictions apply

Problem example



Problem example - TPF4.1



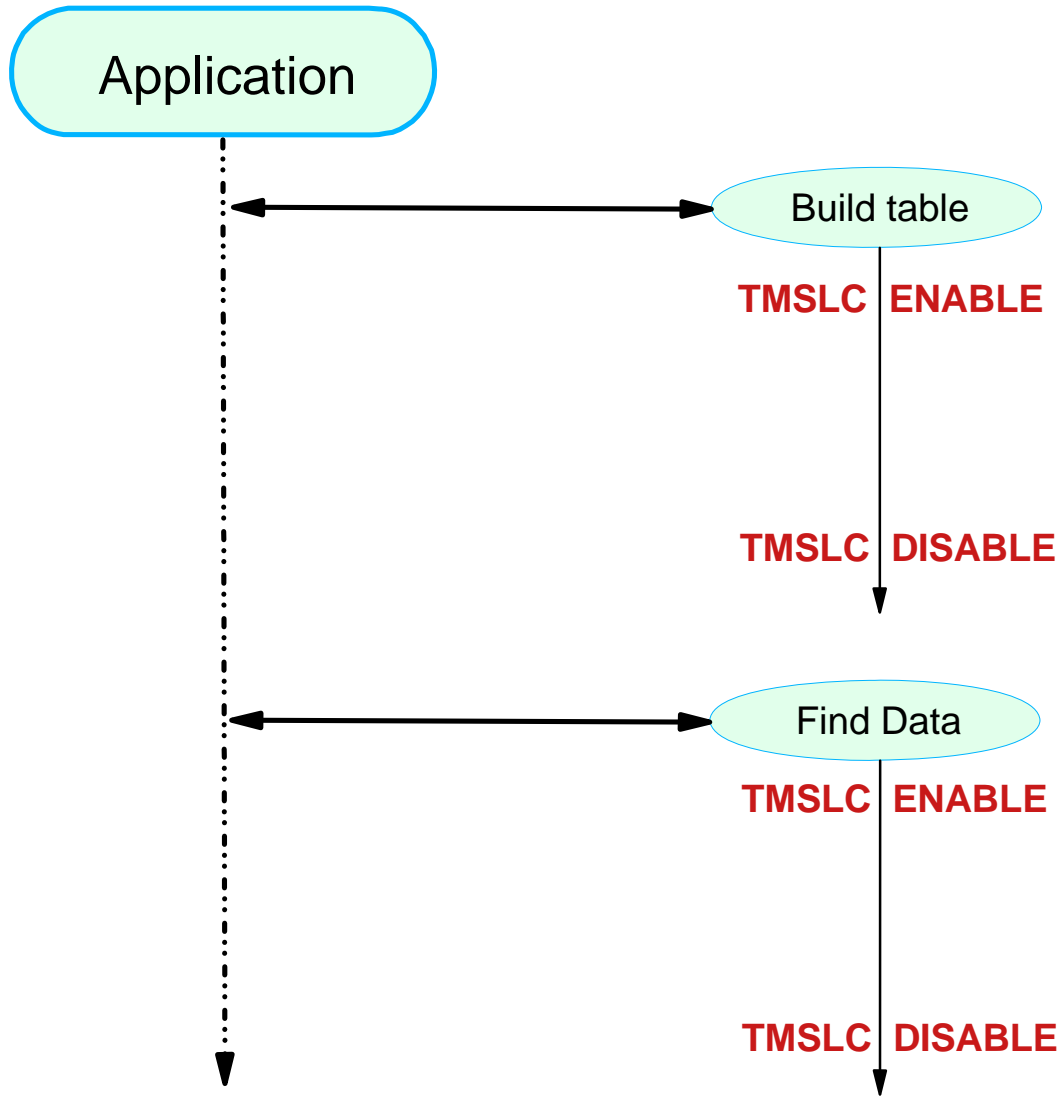
z/TPF Support and Control

- CTL-10 avoidance
 - ▶ Special program list removed from CP
 - ▶ New program allocation characteristics added
 - ◆ TIMEOUT=DEFAULT (500ms or user defined)
 - ◆ TIMEOUT=*number* - number of timer pops before taking CTL-10
 - ◆ TIMEOUT=CALLER - use the calling programs TIMEOUT value
 - ▶ SETOC function still supported

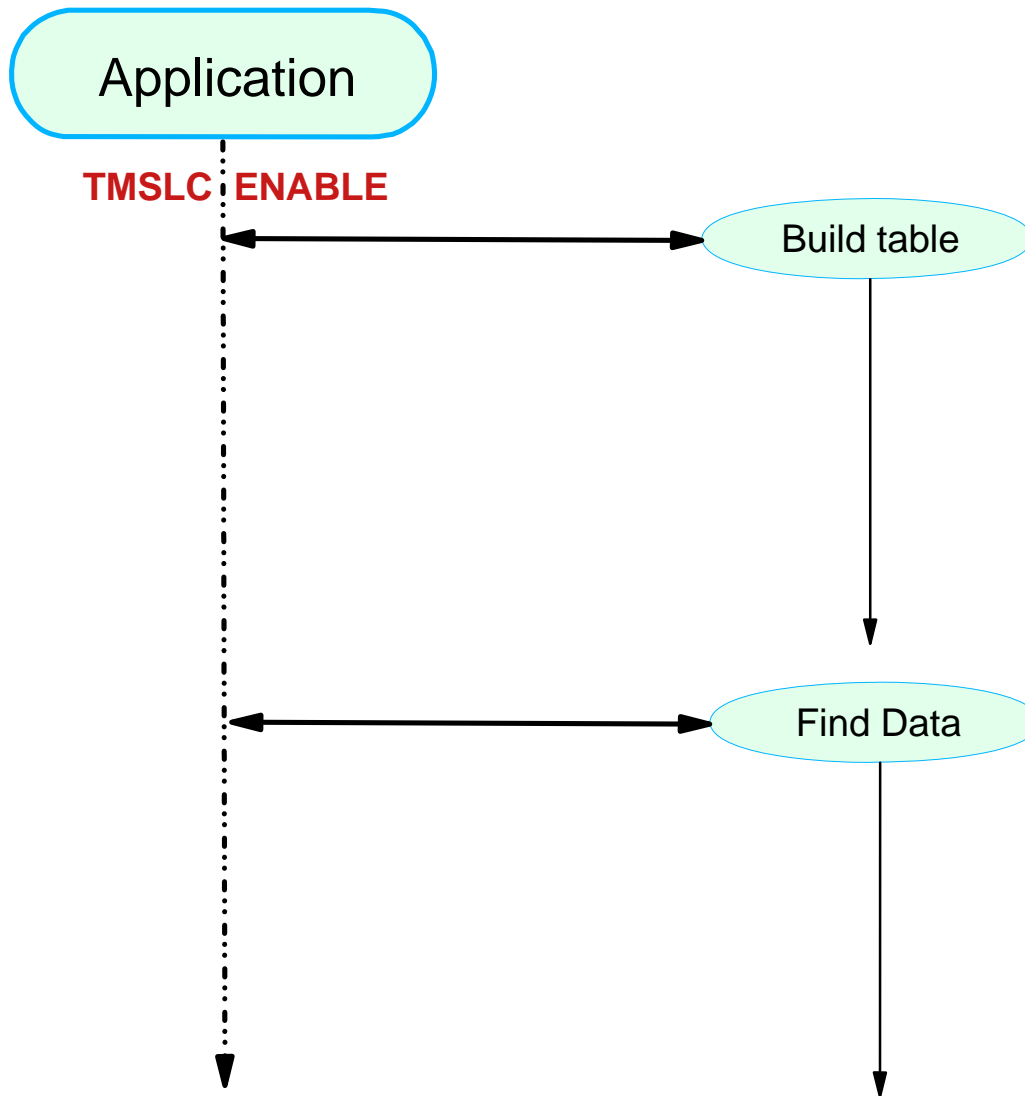
z/TPF Support and Control

- Support cycle intensive programs
 - ▶ TMSLC environment scope expanded (PJ31515 z/TPF)
 - ◆ Scope now spans life of ECB
 - ◆ 4.1 restrictions lifted
 - ◆ Nesting of TMSLC environments supported
- New program allocation characteristic added
 - ▶ TIMESLICE - program is allowed to be suspended when TMSLC or LODIC environments are enabled
 - ▶ NOTIMESLICE - program is not allowed to be suspended
 - ◆ Suspend is delayed until backc/return to caller

Problem example - TPF4.1



Problem example - z/TPF



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