

Novel or Incremental?

A Study of Program Locality and Lifetime Functions, SOSP 1975

A program model can be regarded as decomposable into two main parts. The micromodel captures the phase-transition behavior by specifying locality sets and their associated reference intervals (phases). The micromodel captures the reference patterns within phases. A semi-Markov model can be used at the macro level, while one of the simple early models ... can be used at the micro level.

SynFull: Synthetic Traffic Models Capturing Cache Coherent Behaviour, ISCA 2014

We observe long running (macro-) phases within applications as well fine-grained variation within macro-phases (micro-phases), and group them through clustering. Within these clusters, we examine the break down of message types dictated by the coherence protocol. These two steps drive a hierarchical Markov Chain that is used to reproduce the traffic behaviour.

Novel or Incremental?

A Study of Program Locality and Lifetime Functions, SOSP 1975

A program model can be regarded as decomposable into two main parts. The **macromodel** captures the **phase-transition behavior** by specifying locality sets and their associated reference intervals (phases). The **micromodel** captures the reference patterns within phases. A **semi-Markov model** can be used at the macro level, while one of the simple early models ... can be used at the micro level.

SynFull: Synthetic Traffic Models Capturing Cache Coherent Behaviour, ISCA 2014

We observe long running (**macro-phases**) within applications as well fine-grained variation within macro-phases (**micro-phases**), and group them through clustering. Within these clusters, we examine the break down of message types dictated by the coherence protocol. These two steps drive a **hierarchical Markov Chain** that is used to reproduce the traffic behaviour.

Implement First, Survey Later

- Discoveries are first-hand
 - Better understanding than if you had read them
- Differentiate
 - Do past assumptions still hold?
 - You may already be different
 - Past work probably evaluated old workloads
- Reviewers are not all-knowing