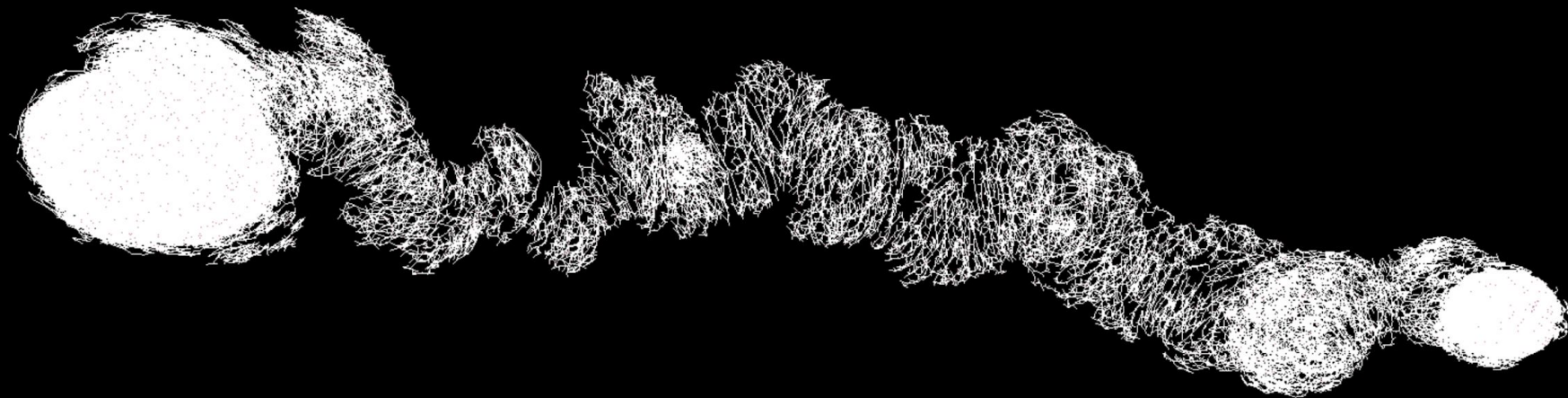




Incremental Marking in Oilpan

BlinkOn 8, Tokyo, Sep 2017

haraken@, hpayer@, keishi@, **mlippautz@**, ulan@

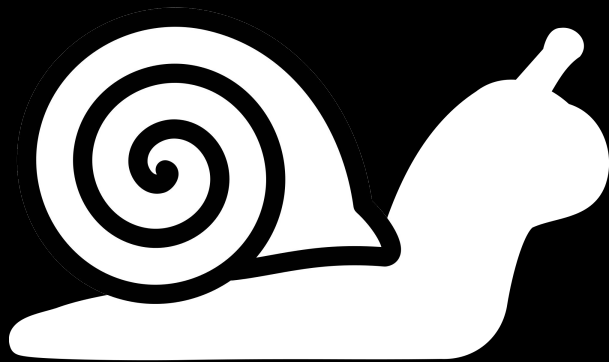
Motivation

Requirement for better integration of Blink and V8

Cooperative GCs on a unified architecture

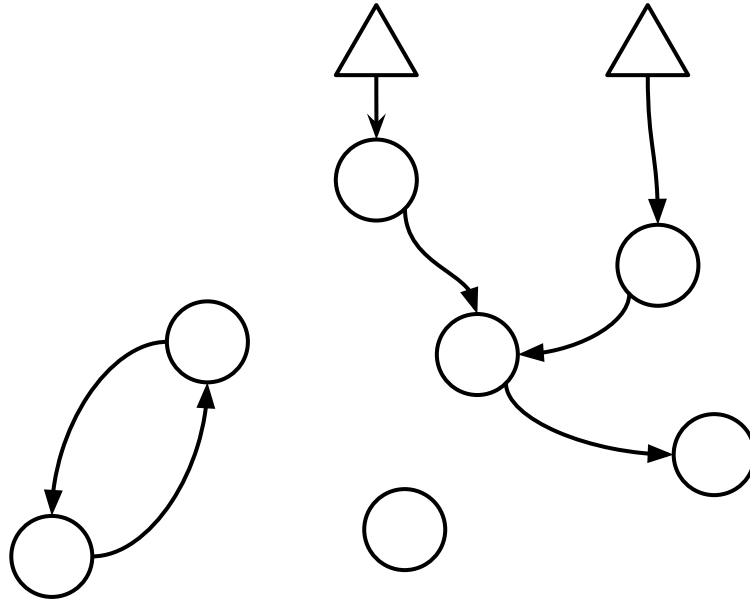
Marking time (UMA)

50ms on 95%-ile on Windows

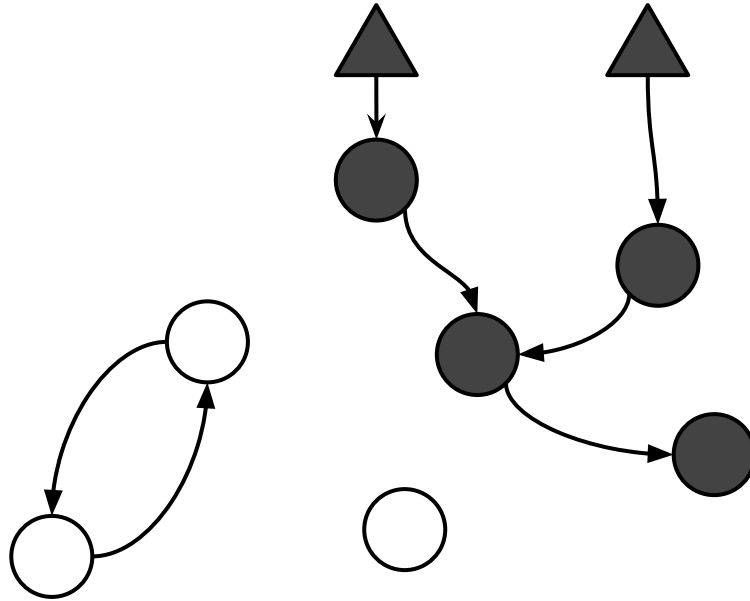


90ms on 95%-ile on Android

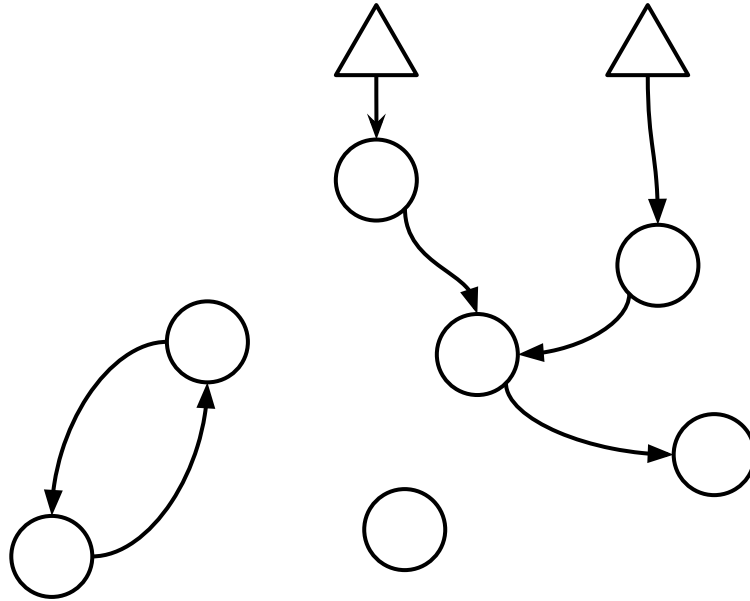
Tracing Garbage Collection



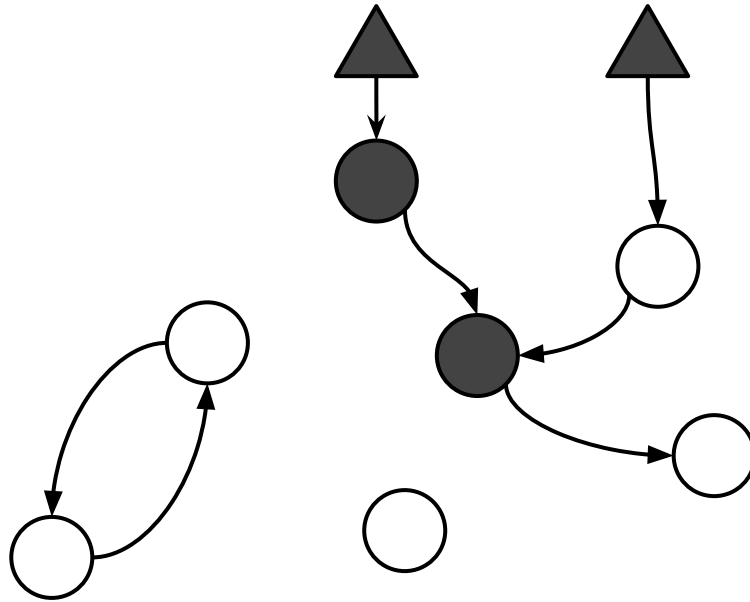
Tracing Garbage Collection



Incremental Tracing Garbage Collection



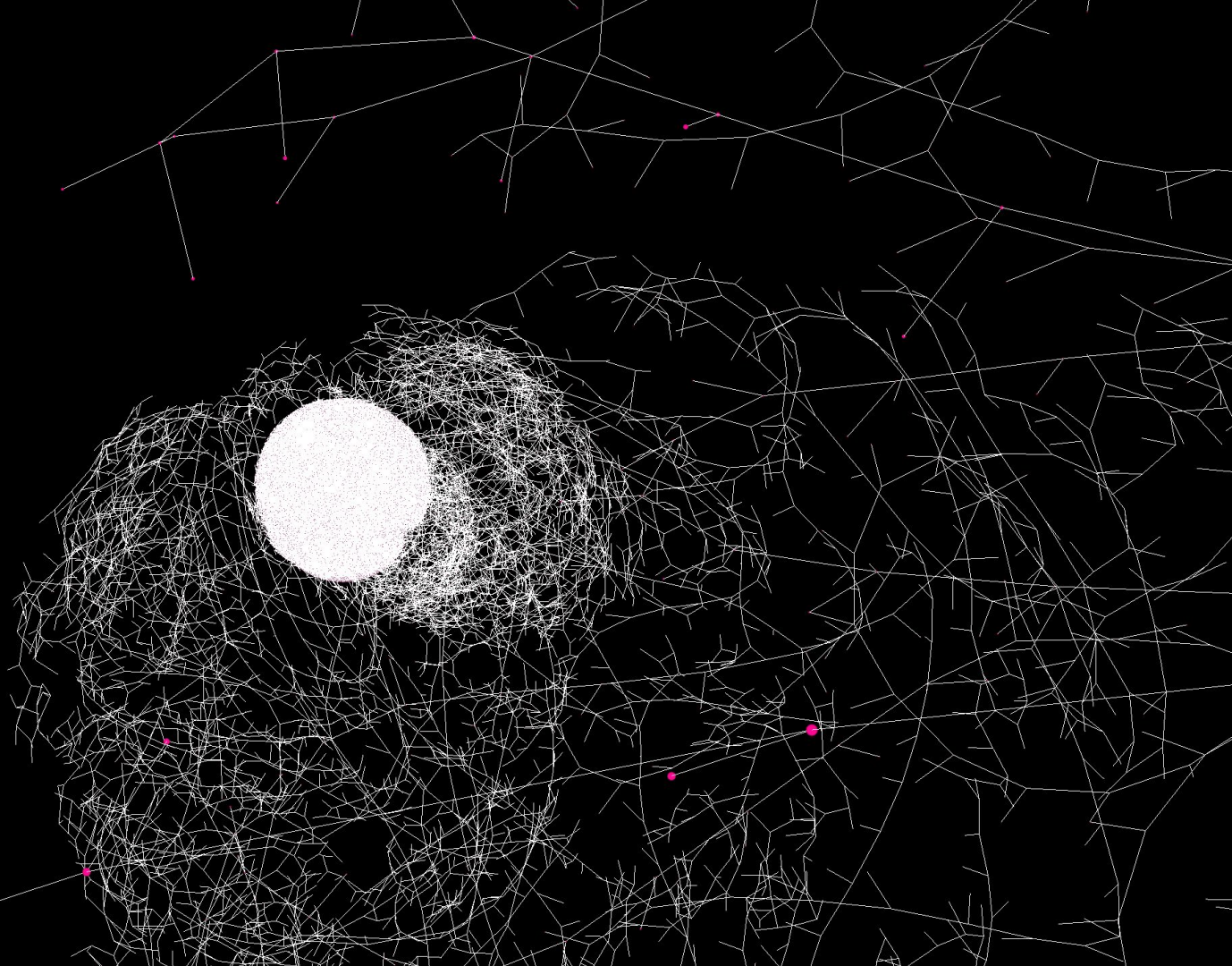
Incremental Tracing Garbage Collection



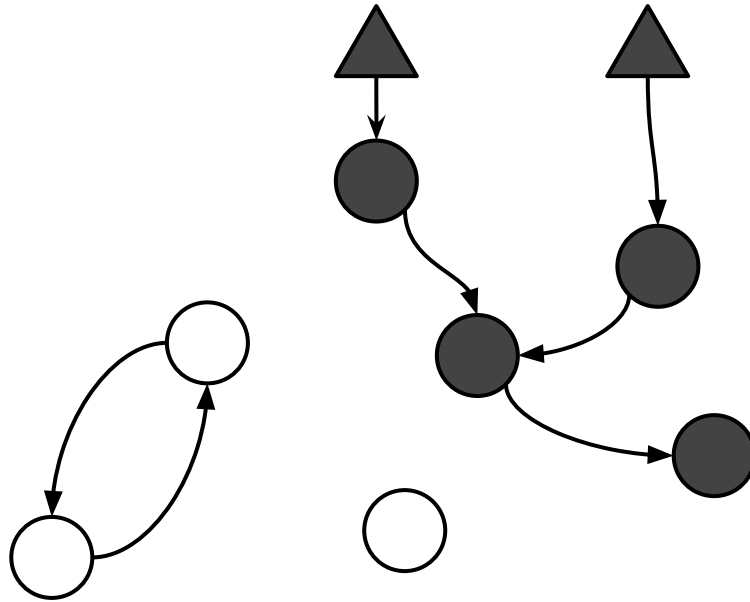
Incremental Tracing Garbage Collection



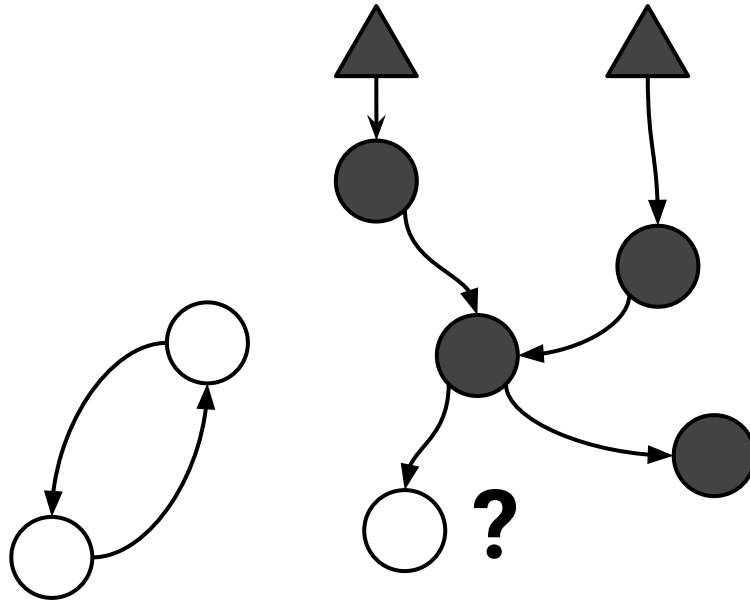
Rendering
the DOM...



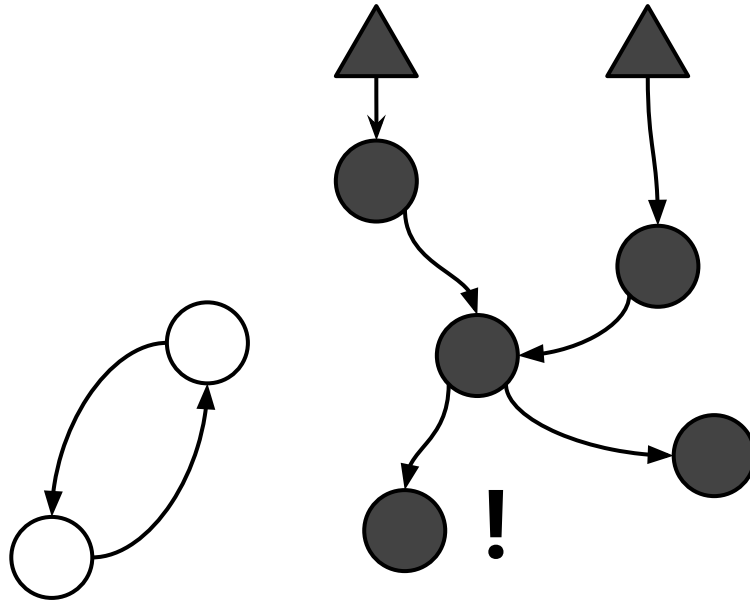
Incremental Tracing Garbage Collection contd.



Incremental Tracing Garbage Collection contd.



Incremental Tracing Garbage Collection contd.



Boilerplate: Wrapper tracing

- Implements incremental tracing for wrappables & wrappers
- Same infrastructure as proposed for Oilpan
- Launched in M57
- Continuously hardened and improved

design doc

bit.ly/oilpan-incremental-marking

