



```
let nodes = /* pairs (node, bool) */;  
let edges = /* pairs (node, node) */;  
  
nodes.iterate(|reach| {  
    reach.join(edges)           // one hop neighbors  
        .concat(nodes)         // plus original nodes  
        .distinct()            // extended neighborhood  
});  
  
for t in times {  
    nodes.insert(..); nodes.remove(..);  
    edges.insert(..); edges.remove(..);  
}
```

An orange callout box with a dark orange border and a pointed left side, containing the C++ code `Stream<(node, bool), (Time, u64), isize)>` in white text.

```
Stream<(node, bool), (Time, u64), isize)>
```



Reach	cores	livejournal	orkut	● ●
GraphX	128	36s	48s	
Socialite	128	52s	67s	● ●
Myria	128	5s	6s	
BigDatalog	128	17s	20s	● ●

[BigDatalog, SIGMOD 2016]

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});  
    Stream<((node, bool), (Time, u64), isize)>  
  
for t in times {  
    nodes.insert(..); nodes.remove(..);  
    edges.insert(..); edges.remove(..);  
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