

Composing High-Performance Memory AI

skilled computer programmers [8, 18]. Unfortunately, this kind of code is brittle and

ual allocation discipline" heap (whose policy the authors do not specify) called UncollectedHeap and a zone allocator called TempHeap. A programmer can creaaho

```
template <class SuperHeap>
class FreelistHeap : public SuperHeap {
public:
    FreelistHeap (void)
        : myFreeList (NULL) {}
    class
```

4. Experimental Methodology

We wrote these heap layers in C++ and implemented

Runtime for General-Purpose Allocators						
Benchmark	Kingsley	KingsleyHeap	KingsleyHeap + coal.	Lea	LeaHeap	
<i>cfrac</i>	19.02	19.75	25.94	19.09	20.14	
<i>espresso</i>	40.66	40.91	44.56	41.12	46.33	
<i>lindsay</i>	3.05	3.04	3.16	3.01	3.03	
<i>LRUsim</i>	836.67	827.10	826.44	831.98	828.36	
<i>perl</i>	66.94	70.01	73.61	66.32	68.60	
<i>roboop</i>	10.81	11.19	17.89	10.89	13.08	

Table 5: Runtime (in seconds) for

```
template <class SuperHeap>
class DebugHeap : public SuperHeap {
private:
    // A freed object has
```

[6] Emery D. Berger, Kathryn S. McKinley, Robert D. Blumofe,
and P