

```
1 public class Universal {
2     private Node[] announce; // array added to coordinate helping
3     private Node[] head;
4     private Node tail = new Node();
5     public Universal() {
6         tail.seq = 1;
7         for (int j = 0; j < n; j++) {
8             head[j] = tail;
9             announce[j] = tail;
10        }
11    }
12    public Response apply(Invoc invoc) {
13        int i = ThreadID.get();
14        announce[i] = new Node(invoc);
15        head[i] = Node.max(head);
16        while (announce[i].seq == 0) {
17            Node before = head[i];
18            Node help = announce[(before.seq + 1) % n];
19            if (help.seq == 0)
20                prefer = help;
21            else
22                prefer = announce[i];
23            Node after = before.decideNext.decide(prefer);
24            before.next = after;
25            after.seq = before.seq + 1;
26            head[i] = after;
27        }
28        head[i] = announce[i];
29        SeqObject myObject = new SeqObject();
30        Node current = tail.next;
31        while (current != announce[i]){
32            myObject.apply(current.invoc);
33            current = current.next;
34        }
35        return myObject.apply(current.invoc);
36    }
37}
```

FIGURE 6.6 The wait-free universal construction.