In this third part of the book, we apply the techniques developed in Part III to real problems seen in a wide variety of systems, including Web Services. The techniques on which we focus are fairly practical and a talented student should not have much trouble employing them in conjunction with a platform such as Spread or Ensemble. We pick problems that are interesting in their own terms, but are also representative of broader classes of issues seen in a wide range of settings and systems, in the hope that the examples developed here might serve as templates for developers working on mission-critical problems in production settings. In fact at the end of Chap. 14 we see some preliminary ideas along these lines, when asking how one might use virtual synchrony in the first tier services of a cloud system, or as a front-end to a replicated and durable database; we will not repeat that material here, although the reader of this chapter should certainly review those options if he or she has not already done so. Particularly important is the discussion of how the Isis² SafeSend protocol must be used with its DiskLogger component if placed in front of a durable database, and even then, an appropriate application-layer state transfer might be needed (would be needed, in fact, if the SafeSend parameter $\phi$ has a value smaller than $n$). By working out that detailed case we intended both to show how the problem can be solved, but also to make it clear that doing so is not trivial even with a powerful tool at one’s disposal! These are just not simple problems to solve, although tools of that kind do make them simpler than they would be without such help.