Microsoft recently announced that it would release a commercial version of its F# functional programming language, designed specifically for developers dealing with concurrency. Functional programming treats computation as the evaluation of mathematical functions while avoiding state and mutable data. Microsoft's S. "Soma" Somasegar says that many ideas from functional languages are helping solve some of the biggest challenges in the industry, such as impedance mismatches between data and objects and the challenges of multi-core and parallel computing space. Java creator and Sun Microsystems Fellow James Gosling says the main problem with functional programming is that only a small portion of the community is interested in or able to learn functional programming. Mads Torgersen, the program manager for Microsoft's C# and a instrumental part of the F# project, says that functional languages are very much in their own world and tend not to interoperate well. F#, however, is designed to run on Microsoft's Common Language Runtime. "F# stems from the functional programming tradition and has strong roots in the ML family of languages, though also draws from C#, LINQ, and Haskell," Somasegar says. "F# runs on the CLR, embraces object-oriented programming, and has features to ensure a smooth integration with the .Net Framework." Torgersen says that F# is a very pragmatic adoption of functional programming and will serve the needs of people doing numerical, scientific, technical, and financial programming that have been forgotten about in the "traveling circus" of object-oriented programming.

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