1

Not *that* [1] Concurrent!

Fringe Presentation

Øyvind TEIG [2]

Autronica Fire and Security AS [3], Trondheim, Norway

Abstract. Concurrency is, in the literature, often used as a noun with a range of strengths: there is *more* or *less* concurrency; it is more or less *limited*; it may even be seen described as *complete*. In trying to discuss multi-threaded programming with programmers who state that they program single-threaded, it is important to communicate that they may program *less* concurrently, but probably not as *non-concurrently* as they believe. What are the factors that increase concurrency and which factors are orthogonal to the degree of concurrency? Does a Go language *goroutine* increase it and is a C++ object orthogonal? Will the CSP paradigm generally enable increased concurrency? Is the CSP paradigm of *communication-with-synchronisation* itself orthogonal to the degree of concurrency? It is also important to understand the term *parallel slackness*: does it introduce or enable more concurrency? And what about *atomicity*? This *fringe* presentation aims to raise more questions that it is able to answer. However, some lines of reasoning are suggested. Finally: is it at all meaningful to raise the awareness of *concurrent* as an adjective? [4]

Keywords. concurrency

---

[1] *demonstrative adjective*: "to such a degree".

[2] (Private) *Øvre Møllenberg 11, 7014 Trondheim, Norway*. E-mail: `oyvind.teig@teigfam.net`.

[3] Autronica is a part of UTC Building & Industrial Systems, a unit of United Technologies Corporation.

[4] This abstract is based on the blog note *"How much concurrency?"* by Øyvind Teig. See `http://www.teigfam.net/oyvind/home/technology/093-how-much-concurrency/` .