



## Σ Ε Μ Ι Ν Α Ρ Ι Ο Τ Μ Η Μ Α Τ Ο Σ

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ΑΙΘΟΥΣΑ:

Θα μεταδοθεί διαδικτυακά μέσω MS Teams

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### Θέμα

## The Athletic Heart Syndrome in Web Service Evolution

### Περίληψη

Like all software, Web services evolve over time. Their evolution may involve the expansion of the services with new functionalities to meet new requirements, or the maintenance of existing functionalities. The service evolution process is under the control of the service providers. This fact alone makes the evolution of Web services an important issue that can affect the viability of the dependent applications and a major concern for the application developers. Relying on services that do not evolve properly can have a negative impact on the evolution of the dependent applications, as well.

In this talk, we will discuss a pattern, called the "athletic heart syndrome", which facilitates the selection of services that evolve properly. Patterns specify best practices that emerge from multiple real-world cases. In our context, the athletic heart syndrome comes out from a study that concerns the evolution of a set of popular, long-lived Amazon services that cover different domains. According to the athletic heart syndrome, the developers should prefer services whose heartbeat of changes looks like the heartbeat of an athlete when he is at rest. Specifically, the heartbeat of changes should involve mostly of calm periods, in



which the service interface does not change, interrupted by spikes of changes that include additions, updates, and rare deletions. Adherence to the pattern signifies that the service evolution involves both the expansion of the services with new functionalities and the maintenance of existing ones. Conformance with the pattern also implies that dealing with changes and service interface complexity is manageable. Finally, compliance with the pattern indicates that the growth of the services is predictable.

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