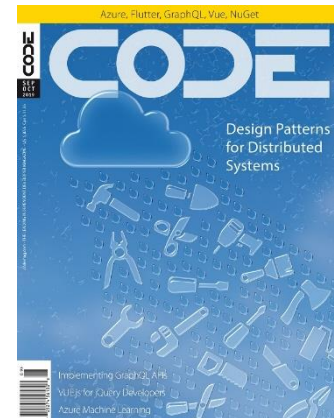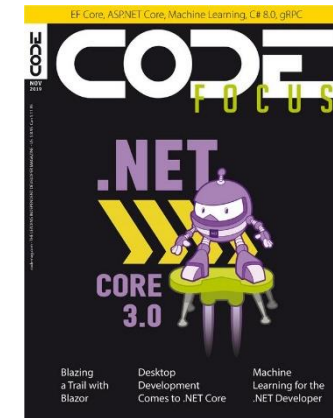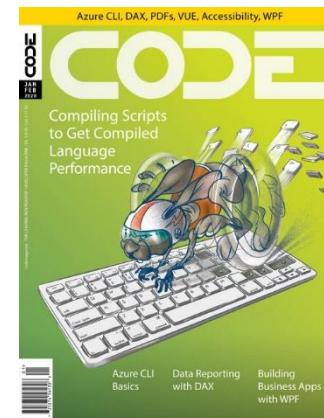# State of .NET Online

Blazor

Markus Egger

President and Chief Software Architect

CODE Magazine & Consulting

About the Presenter

- **Markus Egger**

- President and Chief Software Architect
  EPS Software Corp. (dba CODE Consulting)

- Publisher – CODE Magazine

- International Author and Speaker

- Microsoft RD (Regional Director)

- Microsoft MVP since 1995

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About CODE & EPS Software Corp.

"Helping People Build Better Software"

- Custom Software Development, Training, Mentoring,...

- Web, Cloud, Mobile, Desktop, Serverless, Databases,...

- User Interface and Interaction Design

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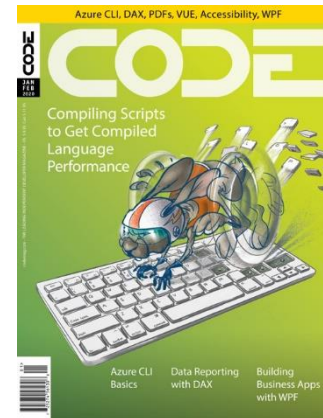- Got questions? Stuck on an issue? Platform and/or architecture decisions to make? We can help!
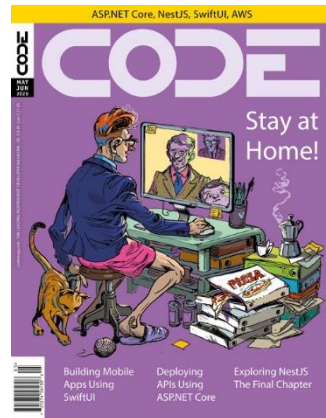
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State of .NET Online

- Due to the Coronavirus Crisis, State of .NET has turned from "sometimes online" to "an online series"

- Expect monthly online events going forward
  - Future topics: Amazon Cloud (AWS), Cognitive Services, DevOps,…
  - Let us know what you are interested in!

- Note that live-events will also continue to be scheduled at various locations once that is possible again

Agenda

- Overview of Blazor and what to expect
- An overview of Client-Side and Server-Side concepts
- Web Assembly
- Lots of code Examples

Event Survey – Win $100!

- Complete this very short 9 question survey for a chance to win a $100 Amazon Gift Card!

- Survey must be completed by 11:59pm EDT on 6/26/2020 to be eligible to win!

- https://tinyurl.com/codeblazor

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Blazor Overview

What is Blazor and why do we need it?

- Blazor is a new web development framework from Microsoft

- Based on the .NET Platform...

- ...both on the Client and the Server

- It is fundamentally different from other client-side frameworks that are based on JavaScript

Blazor Advantages

- C# Language (yes, even in the browser!)
- Great Tooling/IDE
- Stability
- Ecosystem
- Based on standards (HTML, CSS, Web Assembly,…)
- Code reuse and share
- Component based
- Skill reuse.

A Tale of Two Blazors

- **Blazor WebAssembly** – Client Side

- **Blazor Server** – Server Side

- Identical code bases
  - With the exception of some down-line differences, such as being able to access data more directly on the server

Blazor Features

- Component model
- Routing
- Layouts
- Forms and validation
- Dependency injection
- Live reload
- JavaScript interop
- Server-side rendering

- Debugging (browser & IDE)
- Rich IntelliSense and tooling
- Fallback to asm.js
- Publishing
- App size trimming

Blazor Release Versions

- Blazor Server released with .NET Core 3

- Blazor Web Assembly released with .NET Core SDK 3.1.300

- Supported in Visual Studio and VS Code (and other .NET editors and IDEs) on all platforms

- blazor.net

WebAssembly

WebAssembly is changing the Web

- In simple terms: binary code for web browsers
- Native performance for the web
  - Think of it as executing native compiled code in a browser
- Cross platform compilation target for any language
- Available in all major browsers
- Provides a "compilation target" for all kinds of languages
- Originally, this was mostly used by C++ game developers
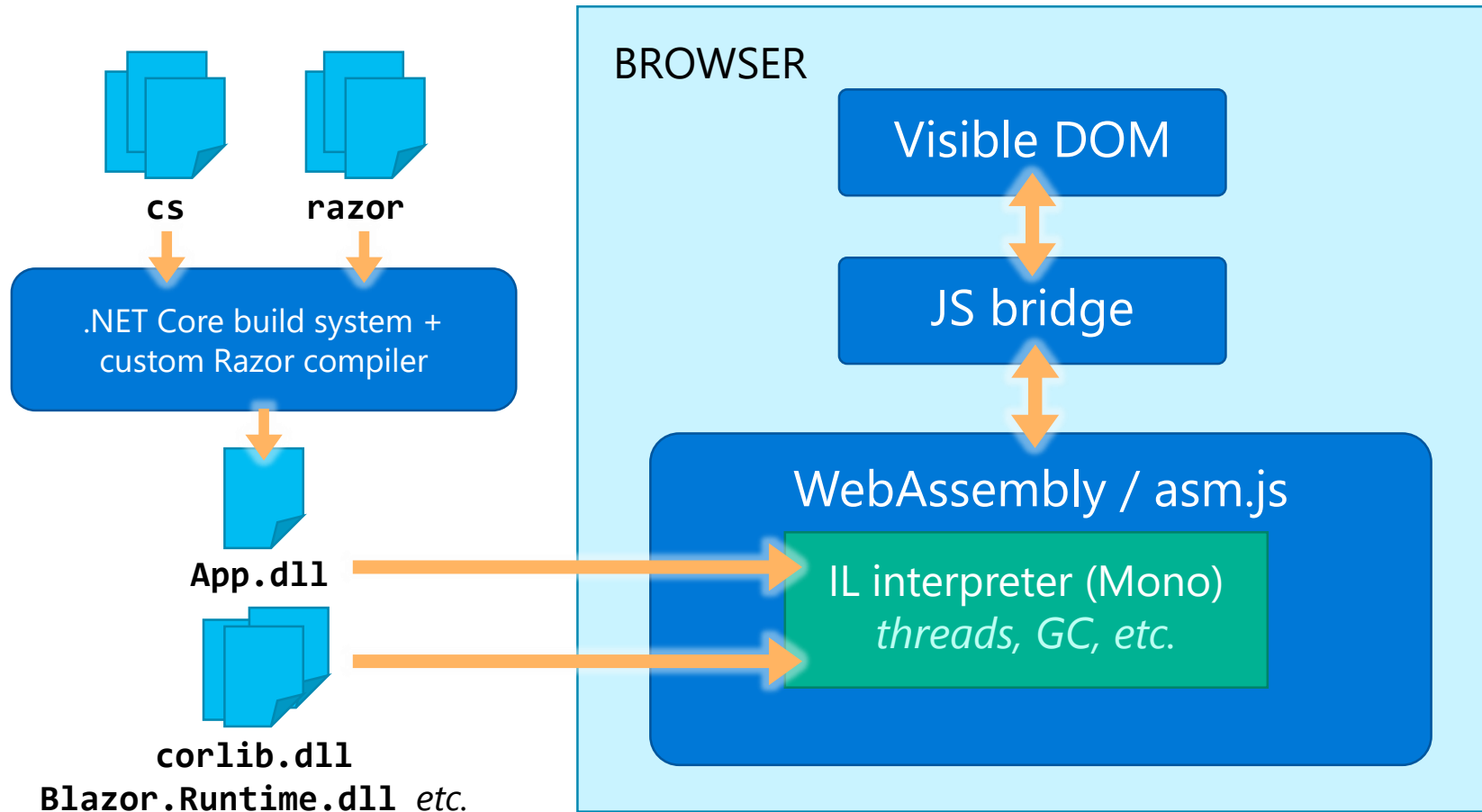
WebAssembly

Can You Use It?

- Yes!
- All major browsers and platform support WebAssembly

How Blazor works

Blazor Demos

Blazor WebAssembly Demo

Visual Studio and VS Code

Blazor Server Demo

Blazor Components Demo

Blazor Debugging Demo

Blazor JavaScript Interop

Blazor Progressive Web App (PWA) Demo

Blazor 3rd Party Components

3rd Party Vendors

Open Source Community

Future Blazor Features (.NET 5 & .NET 6)

- Blazor Server and Blazor WebAssembly as key components of .NET 5 and .NET 6 (and beyond)

- Component Model Improvements
  - Type constraints, required parameters, IAsyncDisposable,...

- Hot reload

- CSS isolation

- .NET WebAssembly enhancements
  - Threads, lazy-loading, performance improvements,...

- ...

Other Announcements

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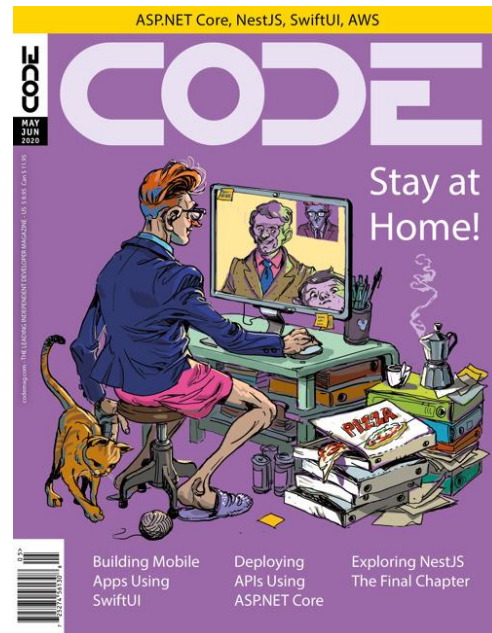
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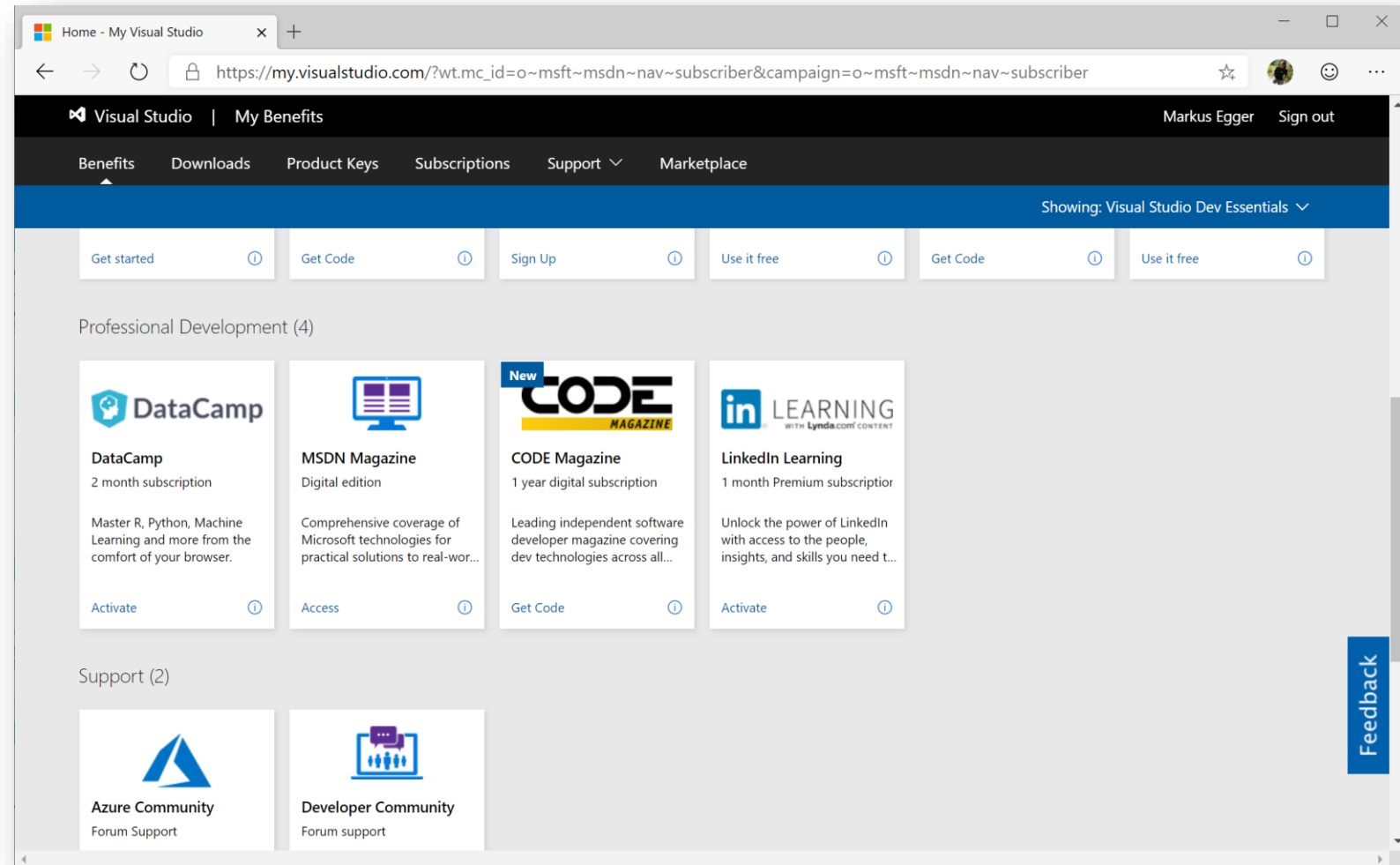
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Next Event:
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July 29th

Q&A

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