

**Title**

Adaptation and Assessment (TwoA) asset in TypeScript (v1.2)

**Authors**

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**Abstract**

Developed within the RAGE project funded by EU within Horizon2020 program. This asset enables a real-time automatic adaptation of game difficulty to player's expertise level. The adaptation algorithm makes use of a stealth assessment algorithm that assigns difficulty ratings and expertise ratings to the players and the game modules respectively. The asset tracks changes in these ratings allowing assessment of players' learning progress either by players themselves or by instructors.

Version 1.2 implements the same sets of functionalities as the C# version 1.2 and includes:

- API for building scenario dependency graphs
- An improved scenario selection algorithm
- The second module for adaptation and assessment based on continuous accuracy only
- Extended parameter setting API

**Screen shots**

none

**Version & change log**

Version	Date	URI
1.2	07-Nov-2017	<a href="https://github.com/rageappliedgame/HATAsset_TS">https://github.com/rageappliedgame/HATAsset_TS</a> <a href="https://github.com/rageappliedgame/HATAsset_TS/tree/c12f2ebd99df34e8d20b3d9f2aef519dfb02b7a4">https://github.com/rageappliedgame/HATAsset_TS/tree/c12f2ebd99df34e8d20b3d9f2aef519dfb02b7a4</a>

**Source code**

[https://github.com/rageappliedgame/HATAsset\\_TS](https://github.com/rageappliedgame/HATAsset_TS)

[https://github.com/rageappliedgame/HATAsset\\_TS/tree/c12f2ebd99df34e8d20b3d9f2aef519dfb02b7a4](https://github.com/rageappliedgame/HATAsset_TS/tree/c12f2ebd99df34e8d20b3d9f2aef519dfb02b7a4)

**Source code license**

Apache License, Version 2.0

**Installing the project**

[https://github.com/rageappliedgame/HATAsset\\_TS/blob/c12f2ebd99df34e8d20b3d9f2aef519dfb02b7a4/TwoA-TypeScript/app.ts](https://github.com/rageappliedgame/HATAsset_TS/blob/c12f2ebd99df34e8d20b3d9f2aef519dfb02b7a4/TwoA-TypeScript/app.ts)

**Dependencies**

RAGE Client-side Asset Architecture: [https://github.com/rageappliedgame/asset-proof-of-concept-demo\\_TypeScript](https://github.com/rageappliedgame/asset-proof-of-concept-demo_TypeScript)

**References**

Nyamsuren, E., van der Vegt, W., & Westera, W. (2017). Automated Adaptation and Assessment in Serious Games: a Portable Tool for Supporting Learning. In Proceedings of the Fifteenth International Conference on Advances in Computer Games 2017 (ACG2017).