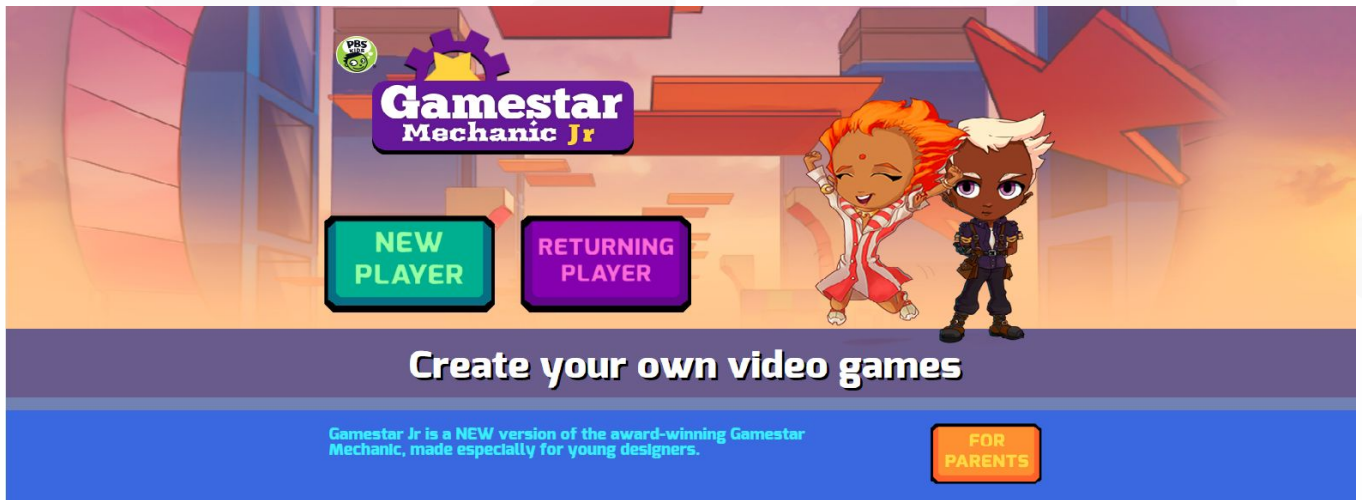


Migration to Google Dart technology

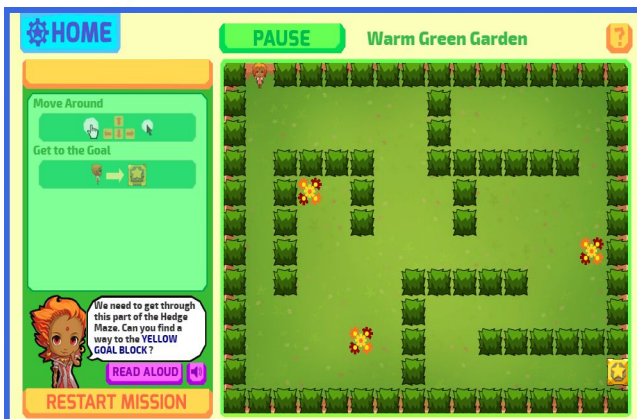


About Gamestar Mechanic Jr

Gamestar Mechanic Jr is a game and community designed to teach kids the principles of systems thinking, design thinking, problem solving and foster such skills as creativity, collaboration, digital media literacies. The game play, vocabulary and design experience are all optimized for children ages 6-9.

The Challenge:

- Migration from Flash to Google Dart (HTML5/Javascript);
- Upgrading the app so it runs in all major browsers regardless of platform;
- Investigation and implementation using cutting-edge technologies;
- Transferring the core functionality of Classic Version of the game and add new features to Junior Version.



Company's role:

Closely cooperating with the client our developers put forward an innovative idea of migration a game to Google Dart language. Our team was one of the first who's used a new technology in production apps.

Throughout the research stage (which includes not less than 30% of the whole workflow) our developers communicated directly with the Google Dart team to find out more about the language.

In order to transfer the core functionality ITrex Group team has designed a new unique code convertor written in Python to convert code from Flash to Dart.

Approximately 40% of the programming code was successfully converted.

Solutions:

- Optimizing graphics performance;
- New video and audio format used to support work in browsers;
- Partial reimplementaion of the game logic;
- Memory optimization (e.g. accordingly with iOS Safari memory limitation);
- Canvas partial rendering used to achieve high FPS in browser.

Results:

- Cutting-edge technology has been successfully used within a reasonable time frame;
- Core functionality of the game was efficiently migrated to Google Dart language;
- Good reference from the customer, ITrex Group team was introduced in the credits on the website.