

## eHARMONY IMPROVES USER EXPERIENCE WITH GROOVY DYNAMIC LANGUAGE

Pasadena, Calif.-based eHarmony, Inc. was founded in 2000 and is a pioneer in using relationship science to match singles seeking long-term relationships. Its services, available in the United States, Canada, Australia and United Kingdom, present users with compatible matches based on key dimensions of personality that are scientifically proven to predict highly successful long-term relationships. According to a study conducted by Harris Interactive for eHarmony in 2007, 236 eHarmony members marry every day in the United States, accounting for 2% of new marriages in the country.

### APPLICATION

eHarmony's entire business depends on the information received from members. This input is fed into eHarmony's innovative system that enables the company to match each member with the right romantic partner. Consequently, access to all member data is essential to eHarmony, because any one piece of information can be vital to the process of identifying the perfect mate.

eHarmony needed to build an application that could search through gigabytes of data – information provided by members going back as far as three years – to identify key words and phrases that could strengthen member profiles via new techniques the company developed. The application had to analyze the data and deliver it back into the website quickly to provide members with high-quality matches.

### CHALLENGE

eHarmony was looking for an efficient way to develop the application quickly.

### SOLUTION

To accomplish the data retrieval task, eHarmony chose to write a script in Groovy, a dynamic language for the Java Virtual Machine that offers a flexible Java-like syntax that developers can learn in a matter of hours.

"Groovy has such wonderful expressiveness," said Jeffrey Gortatowsky, Software Architect at eHarmony. "It is so concise that one line of Groovy translates into 20 lines of Java."

"Using Groovy, I was able to quickly get through gigabytes of data, even on my laptop," says Gortatowsky. "I was able to analyze the data, write the output and get it to the research team so they could look through it, and feed it back into our database."



#### APPLICATION OVERVIEW

In one day, eHarmony used Groovy to write a script to search through gigabytes of data going back 3 years.

#### GROOVY RESULTS

Groovy delivers the following business results to eHarmony:

- Accelerated Development Cycle – reduced from several days to one day
- Fast Feature Delivery and Improved User Experience
- Focus on Business Objectives
- Greater Creativity
- Higher Quality

"Groovy enabled us to quickly write scripts. I wrote the data retrieval script in a day, even with everything else I had to do. It would have added days to write the same simple script in Java."

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### BENEFITS

Groovy delivers the following business results to eHarmony:

#### Accelerated Development Cycle

"Groovy enabled us to write scripts quickly," Gortatowsky confirms. "I wrote the data retrieval script in a day, even with everything else I had to do. It would have added days to write the same simple script in Java because I would have had to write the regular expression code, XML parsing and the file I/O."

Our research team was trying to figure out the next best way of gauging compatibility between two people. The faster I could provide them with the data they needed, the faster we could continue to improve our product."

"When you look at all the things we do in a month, all these productivity gains from Groovy add up to a significant amount of time," added Eddie Thomas, Senior Director, Engineering.

#### Fast Feature Delivery and Improved User Experience

The speed gains enabled by Groovy are not just about productivity. For a website like eHarmony.com, where so many people are meeting each other on a daily basis, every day counts.

"Any time an engineer can get work done a little quicker means we can get a feature to the website faster and help people find better matches," says Gortatowsky.

"When it comes to enhancing the user experience, a day does make a difference," Thomas adds.

"Members are constantly checking and communicating with their matches. Any enhancement we can develop quickly using Groovy makes a big difference to the whole eHarmony ecosystem."

"Ultimately, we give our users a better experience based on what we learned by running these Groovy scripts over our data," Gortatowsky points out.

This allows the eHarmony team to remain focused on business objectives, not coding scripts.

#### Greater Creativity

"Coding in Groovy is fun," Gortatowsky claims. "You can try many different approaches in Groovy. You can go down a path and explore it to the max."

#### Higher Quality

"Groovy requires less code, and fewer lines of code equals higher quality," says Gortatowsky. "Java's boilerplate code has already been tested by the Groovy team."

"Plus the Grails framework comes with testability baked in, because it's based on Spring," he adds. "Every time you write a domain class or a controller class it reminds you that you need to do an integration test and a unit test."

#### Easier Maintenance

"In Groovy and Grails, you see the 3-4 lines of business logic, not the additional code you would see in Java," says Thomas. "I think it greatly enhances the readability of the code. Someone can look at it and immediately know what is going on."

#### Stronger Development Skills

Groovy makes a developer a better Java programmer, Thomas concludes, because it encourages the developer to find better, more efficient ways of building applications, even when developing in Java.

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