

CASE STUDY  
NORTH SIDE INC.

# Mission: Bypass SQL

Developers at North Side Inc., a MMO game developer located in Canada, are conducting a difficult mission. Enabling Bot Colony players to converse with the game's characters requires access to vast amounts of linguistic data and is very CPU-intensive. They decided to explore Versant Object Database – and to bypass SQL.

**Challenge.** Bot Colony is a massive multiplayer game developed by North Side Inc., Canada. The game leverages breakthroughs in Natural Language Processing (NLP), which is extremely intensive in terms of CPU requirements.

**Solutions.** Developers at Northside became interested in Versant when they ran into a programming bottleneck, consisting of serialization and de-serialization of data with MySQL. They decided to explore Versant Object Database – and to bypass SQL.

**Results.** NLP is an example of a complex, hierarchical data structure utilizing Versant's scalable database solution to solve the mission critical implementation and performance issues North Side was facing using MySQL. Using Versant technology has allowed for increased programmer productivity, overcoming of memory limitations, and eliminating the need to serialize and de-serialize data to SQL.



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## First conversation game ever

Bot Colony is a massive multi-player game developed by North Side Inc., a progressive MMO game developer located in Canada. What makes Bot Colony unique is its positioning as the first conversation game ever.

The player converses with the game's characters in English to solve a mystery and conduct missions. While there have been other games before where the player speaks with the characters to some extent (Starship Titanic, Seaman, Façade), the answers were prepared in advance.

Bot Colony leverages breakthroughs in Natural Language Processing and Artificial Intelligence to provide highly relevant, factually correct answers, and the ability to ask relevant questions and to make relevant comments. These answers are generated dynamically, based on the storyline of the game.

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## Extremely CPU-intensive

This NLP component is extremely intensive in terms of its CPU requirements, requiring access to vast amounts of data for linguistic processing and reasoning. The system database contains both linguistic data and a large store of world knowledge, represented as formal axioms.

North Side became interested in Versant when it ran into a programming bottleneck, consisting of serialization and de-serialization of data with MySQL.

“The serialization and de-serialization of data with MySQL was performed by one person acting as database administrator, who was responsible for defining the database schema, adding new tables, etc. As language R&D goes on, there is large pent-up demand to add many new data structures and support new applications, and having to go through one person to do that meant serious delays in the project. We decided it was not viable to continue working in this manner.

“The ability to bypass splitting application objects into records and reconstitute them again when they’re read in and used by the application was very attractive to the company, which decided to explore Versant as a solution.”

Eugene Joseph,  
North Side Inc. CEO.

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## Complex, hierarchical Data Structures

“The ability to bypass splitting application objects into records and reconstitute them again when they’re read in and used by the application was very attractive to the company, which decided to explore Versant as a solution”, said Eugene Joseph, North Side Inc. CEO.

The NLP is an example of a complex, hierarchical data structure utilizing Versant’s scalable database solution to solve the mission critical implementation and performance issues North Side was facing using MySQL. Using Versant technology has allowed for increased programmer productivity, overcoming of memory limitations, and eliminating the need to serialize and de-serialize data to SQL.

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## About North Side, Inc.

North Side has been conducting R&D in natural language understanding since 2002, with an application in virtual crew-member training (team trainers where some of the human trainees don’t exist, and are replaced by intelligent agents who speak on their behalf). The decision to unveil this technology through a video-game was made in 2007. The technology powering Bot Colony™ has applications that go beyond gaming: it holds the key for a radically different e-commerce experience, where a consumer will simply speak to his/her computer to buy travel and banking products, seek information, or access customer support.