SOLUTION BRIEF

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ALVEO™

- Standard SQL Query on video and image files

- On demand inferencing or batched subject classification

- Ability to join videos and images with relational data

INTRODUCTION

Today, millions of video cameras are capturing incredible amounts of frames of video per second that contain valuable data. Extracting critical information and actionable insights, however, is a challenging task. Whether it's the police trying to locate a person within 5-mile radius of a crime scene, or transportation agency looking to design safer roadways, the challenge is effort and time to insight, leveraging data. This goes far beyond simply classifying object attributes in video. It becomes a database problem.

PRODUCT OVERVIEW

Deepgreen DB for Video Discovery is a Massively Parallel Postgres (MPP) data warehouse platform designed for big data analytics on unstructured video data and structured relational data. It is built to solve complex analytical problems efficiently by orchestrating a large cluster of FPGA accelerated nodes to scan through large volumes of data while performing complex summarization and comparison operations. The integration of Xilinx Alveo accelerator cards and Xilinx ML Suite into the MPP cluster imparts the ability to perform analytics on video.

End customers and application developers can leverage Deepgreen DB for Video Discovery to build big data solutions that uncover insights locked within videos and images. The platform provides a powerful and convenient standard SQL based environment conducive to practical data warehouse operations and, in addition, incorporates primitives to unleash the power of Xilinx Alveo and ML Suite on video files. Depending on the amount of data/video and query speed required, the Deepgreen DB platform can be scaled out horizontally and vertically by adding compute nodes and/or Alveo resources.

SOLUTION OVERVIEW

MPP Data Warehouse based on Open Source Greenplum

Based on the most popular open source data warehouse solution:
- Horizontal scaling
- Standard SQL for OLAP
- Exceptional speed based on JIT technology
- Flexible and heterogenous storage
- Connectivity to myriads of data sources, including S3, HDFS, Kafka and Oracle.
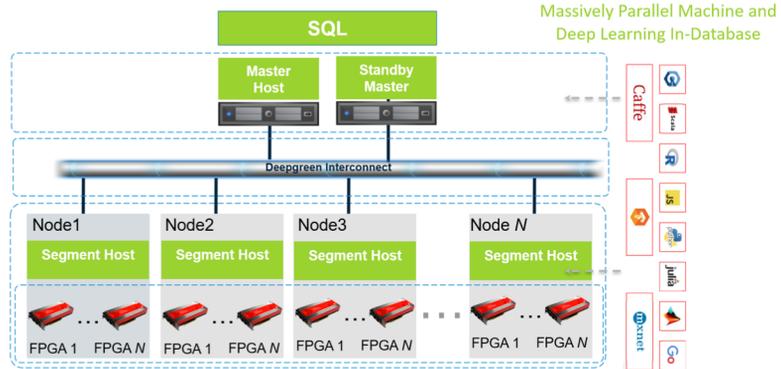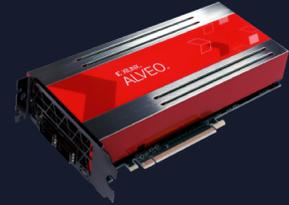
XILINX®

Adaptable. Intelligent.

INTEGRATED PLATFORM

Searchable Tag
Who, what,
where, when
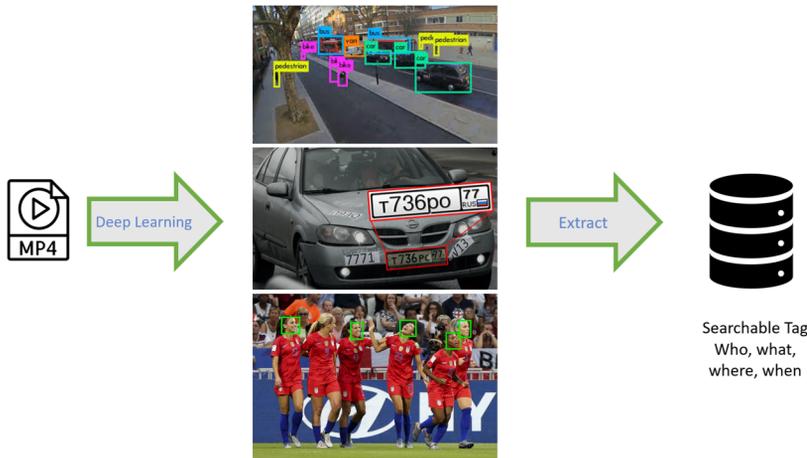
Deepgreen DB for Video Discovery platform incorporates SQL primitives to invoke ML Suite and Alveo FPGA resources. For a particular video, users can quickly locate the video and retrieve and extract subject and meta data from the video. Data can be further joined to other tables in the database for increased fidelity. In addition, Videos related to specific subjects at certain times and within geographic proximity can be extracted.

Deepgreen MPP Features

- PB-scale Data Warehouse
- Industry-leading performance
- Proven solution in Government, Finance, Telco
- Simple SQL interface

Deepgreen Platform Features

- Live tagging
- Batched tagging
- Join videos at time T to videos at time T + 5 minutes
- Join videos with other dimension data, e.g. car license registration
- Ad-hoc SQL to discover videos based on previous results

TAKE THE NEXT STEP

Learn more about Alveo accelerators
Learn more about Vitesse Data: www.vitessedata.com
Reach out to the team at info@vitessedata.com to learn more.