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TARARI CONTENT PROCESSORS

2005 COMPUTERWORLD HONORS CASE STUDY

Business & Related Services
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SUMMARY

As the first management inspired spin-out from Intel Corporation, Tarari set out on a mission nearly three years ago to design, develop and bring to industry a new breed of silicon – one focused on Content Processing. A key solution for a consistent performance challenge experienced in enterprise networks, Tarari component products are deployed in servers, switches, appliances, devices and more, in markets such as, XML and Web Services, Network Security and Digital Media.

APPLICATION

The "pain" Tarari solves is very real and fundamental to any enterprise network. Over the past several years, there was a tremendous investment made to accelerate and process packets as they move through networks and servers. However, typical processing procedures are limited to looking at packet headers, doing some table look-up's, and sending the packets on their way.

The real pain point today, is that there is a wealth of valuable information in the payload of the message ... but it has been simply too complex and compute intensive to access at the current network speeds and input rates. This is painful and costly for enterprises, data centers and service providers who truly want to use that information to control and secure their traffic and messages. It is equally painful for the server and network equipment vendors who want to address that need, but who struggle with the trade-off between intelligently understanding the traffic and pumping the greatest amount of messages and data through their boxes.

Enter Tarari – Tarari Content Processors ensure that the information in the payload of messages can be accessed ... and most importantly, at network speeds without the performance penalties experienced in traditional solutions which are focused on static algorithms and processing schemes.

Tarari's core technology provides a flexible architecture and platform that is based on ASICs, dynamically reprogrammable hardware and high speed software upon which a variety of specialized processing engines can be created. Tarari's initial focus applies this technology in key areas such as XML/Web Services, Network Security and Digital Media.

BENEFITS

Enterprise networks, large or small, are experiencing huge volumes of additional traffic. Some of the traffic is a result of the plethora of SPAM, viruses, and other malware that continues to infest and plague business. Some of the traffic is a result of the verbose XML programming language. Both of these network "hogs" appear to be here to stay. In fact, industry analyst Ron Schmelzer of Zapthink was quoted recently "nearly 50% of all network traffic will be XML based by 2010." The pain-points caused by even these two examples are real, here and now. We don't even know yet, what we don't know about. In all instances, the network typically suffers in three key areas: Performance, content inspection (SPAM, viruses, compliance and the like) and the inability for dynamic change.

Tarari Content Processors address these three key challenges – the solution is available now.

1. Performance – Tarari's Content Processors provide extreme acceleration in algorithm speed for compute intensive, high bandwidth applications, and enables deep message inspection at network speeds.

2. Allows deep payload inspection of data: Tarari's content processors perform at a message level and are not confined to packet-level data. Regardless of message size, Tarari's content processors can search each message or XML data stream for specific content. In the case of network security applications, the content only returns "hits" on the identified virus, SPAM or compliance key. The remaining data freely flows through the network at wire speeds.

3. Dynamic reconfiguration and field upgradeable: Tarari's Content Processors quickly incorporates new product features, new application accelerators, changes to industry standards or specifications, bug fixes, in response to changing traffic patterns in the network by simply loading a new Acceleration Agent Set. This reconfiguration takes place in a fraction of a second, without expensive hardware changes, and without requiring a system reboot or reset.

IMPORTANCE

The Content Processing technology and design, development and delivery of the content processing products are intertwined – they are fundamentally not possible without one another.

ORIGINALITY

Tarari Content Processors are fundamentally based on self-developed, ground-breaking technology. It is clearly demonstrated by the ten pending patents in areas of:

- Encryption/Decryption
- Decoding
- Hardware Acceleration
- Parallel Operations
- Query Optimization
- Parsing

SUCCESS

Tarari Content Processors have been recognized with industry awards from, Networld+Interop in 2003 as the Best New Start-up, American Electronics Association (AEA) winner in 2004 and University of California, San Diego - Most Innovative Product (UCSD MIP) winner in 2004.

DIFFICULTY

Many organizations have seen and identified the challenges associated with performance in the enterprise network. There are software-solutions that attempt to perform at wire speeds. Only Tarari has executed on an innovative, "silicon" solution that offers a paradigm shift in the processing and deep-inspection of content in the enterprise network.