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Cisco Technology Inc. Patent Issued for Virtual reality for network configuration and troubleshooting (USPTO 11178020)

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2021 DEC 8 (VerticalNews) -- By a News Reporter-Staff News Editor at Computer Weekly News -- According to news reporting originating from Alexandria, Virginia, by VerticalNews journalists, a patent by the inventors Apostolopoulos, John (Palo Alto, CA, US), Barton, Robert E. (Richmond, CA), Henry, Jerome (Pittsboro, NC, US), filed on April 24, 2019, was published online on November 16, 2021.

The assignee for this patent, patent number 11178020, is Cisco Technology Inc. (San Jose, California, United States).

Reporters obtained the following quote from the background information supplied by the inventors: "A computer network or data network is a telecommunications network that allows computers to exchange data. In computer networks, networked computing devices exchange data with each other using a data link. The connections between nodes are established using either cable media or wireless media. The best-known computer network is the Internet.

"Network computer devices that originate, route, and terminate the data are called network nodes. Nodes can include hosts such as personal computers, phones, servers as well as networking hardware. Two such devices can be said to be networked together when one device is able to exchange information with the other device, whether or not they have a direct connection to each other. Computer networks differ in the transmission medium used to carry their signals, the communications protocols to organize network traffic, the network's size, topology, and organizational intent."

In addition to obtaining background information on this patent, VerticalNews editors also obtained the inventors' summary information for this patent: "Overview

"Virtual reality for network configuration may be provided. First, topology data corresponding to a network may be received. Next, a Virtual Reality (VR) representation of the network may be displayed on a VR user interface device based on the received topology data. Changes to the network may be received from a user through the VR user interface device. Effects on behavior of the network that would result in response to the received changes may then be displayed in the VR representation of the network on the VR user interface device.

"Both the foregoing overview and the following example embodiments are examples and explanatory only, and should not be considered to restrict the disclosure's scope, as described and claimed. Furthermore, features and/or variations may be provided in addition to those described. For example, embodiments of the disclosure may be directed to various feature combinations and sub-combinations described in the example embodiments.

"Example Embodiments

"The following detailed description refers to the accompanying drawings. Wherever possible, the same reference numbers are used in the drawings and the following description to refer to the same or similar elements. While embodiments of the disclosure may be described, modifications, adaptations, and other implementations are possible. For example, substitutions, additions, or modifications may be made to the elements illustrated in the drawings, and the methods described herein may be modified by substituting, reordering, or adding stages to the disclosed methods. Accordingly, the following detailed description does not limit the disclosure. Instead, the proper scope of the disclosure is defined by the appended claims."

The claims supplied by the inventors are:

"1. A method comprising: receiving topology data corresponding to a network; displaying a Virtual Reality (VR) representation of the network on a VR user interface device based on the received topology data, wherein displaying the VR representation of the network comprises displaying a three dimensional living topology rendering of the network, and wherein displaying the VR representation of the network comprises: overlaying, in the VR representation of the network, a haptic hologram over an image of a device in the network, the haptic hologram providing a stereo viewing of networking and configuration functions, and overlaying, in the VR representation of the network, another hologram corresponding to an interface in the network; providing the user with a haptic feedback when the user traces an object in the VR representation needs attention; receiving, from a user through the VR user interface device, changes to the network; and displaying, in the VR representation of the network on the VR user interface device, effects on behavior of the network that would result in response to the received changes.

"2. The method of claim 1, wherein receiving the topology data further comprise importing configuration and log information corresponding to the network.

"3. The method of claim 1, wherein the hologram indicates at least one of the following: a networking function corresponding to the device and a configuration function corresponding to the device.

"4. The method of claim 3, further comprising receiving a response to the hologram from the user via at least one of the following: virtual touch and speech.

"5. The method of claim 1, wherein the another hologram comprises a virtual representation of an on/off switch having an on position that enables the interface and an off position that disables the interface.

"6. The method of claim 5, further comprising receiving a response to the another hologram from the user via at least one of the following: virtual touch and speech.

"7. The method of claim 1, wherein the another hologram comprises a menu comprising a plurality of symbols respectively corresponding to different configuration functions of the interface.

"8. The method of claim 7, further comprising receiving a response to the another hologram from the user via at least one of the following: virtual touch and speech.

"9. A method comprising: analyzing configuration information of network devices in a network; displaying a Virtual Reality (VR) representation of the network on a VR user interface device based on the analyzed configuration information, the VR representation identifying trouble on the network, wherein displaying the VR representation of the network comprises displaying a three dimensional living topology polygon rendering of the network, and wherein displaying the VR representation of the network comprises: overlaying, in the VR representation of the network, a haptic hologram over an image of a device in the network, the haptic hologram providing a stereo viewing of networking and configuration functions, and overlaying, in the VR representation of the network, another hologram corresponding to an interface in the network; providing the user with a haptic feedback when the user traces an object in the VR representation needs attention; receiving, from a user through the VR user interface device, changes to the network, the changes directed toward fixing the identified trouble; and displaying, in the VR representation of the network on the VR user interface device, effects on behavior of the network that would result in response to the received changes.

"10. The method of claim 9, wherein analyzing the configuration information of network devices further comprise converting configuration parameters into a symbolic representations, and wherein displaying the VR representation comprises displaying the symbolic representations.

"11. The method of claim 9, wherein analyzing the configuration information of network devices further comprise grouping a set of commands into a symbolic representations, and wherein displaying the VR representation comprises displaying the symbolic representations.

"12. The method of claim 9, wherein the VR representation identifying trouble on the network comprises identifying a location on the network with a configuration block different from that of analog objects in the network.

"13. The method of claim 9, wherein the VR representation identifying trouble on the network comprises identifying an object on the network that has a configuration different from that of a reference configuration source.

"14. The method of claim 9, wherein the VR representation identifying trouble on the network comprises providing the user with the haptic feedback when the user selects an object in the VR representation that needs attention.

"15. A system comprising: a memory storage; and a processing unit coupled to the memory storage, wherein the processing unit is operative to: receive topology data corresponding to a network; display a Virtual Reality (VR) representation of the network on a VR user interface device based on the received topology data, wherein the processing unit being operative to display the VR representation of the network comprises the processing unit being operative to display a three dimensional living topology rendering of the network, and wherein the processing unit being operative to display the VR representation of the network comprises the processing unit being operative to: overlay, in the VR representation of the network, a haptic hologram over an image of a device in the network, the haptic hologram providing a stereo viewing of networking and configuration functions, and overlay, in the VR representation of the network, another hologram corresponding to an interface in the network; provide the user with a haptic feedback when the user traces an object in the VR representation needs attention; receive, from a user through the VR user interface device, changes to the network; and display, in the VR representation of the network on the VR user interface device, effects on behavior of the network that would result in response to the received changes.

"16. The system of claim 15, wherein the processing unit being operative to receive the topology data further comprise the processing unit being operative to import configuration and log information corresponding to the network.

"17. The system of claim 15, wherein the hologram indicates at least one of the following: a networking function corresponding to the device and a configuration function corresponding to the device.

"18. The system of claim 17, wherein the processing unit is further operative to receive a response to the hologram from the user via at least one of the following: virtual touch and speech.

"19. The system of claim 15, wherein the another hologram comprises a virtual representation of an on/off switch having an on position that enables the interface and an off position that disables the interface.

"20. The system of claim 15, wherein the another hologram comprises a menu comprising a plurality of symbols respectively corresponding to different configuration functions of the interface."

For more information, see this patent: Apostolopoulos, John. Virtual reality for network configuration and troubleshooting. U.S. Patent Number 11178020, filed April 24, 2019, and published online on November 16, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11178020.PN.&OS=PN/11178020RS=PN/11178020

Keywords for this news article include: Business, Computer Network, Technology Companies, Cisco Technology Inc..

Document COMWKN0020211202ehc2000i2

Cisco Technology Inc. "Increasing Synchronization Of Virtual Reality Scene Elements With Software Defined Network (Sdn) Originated Information" in Patent Application Approval Process (USPTO 20210120507)

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6 May 2021
Politics & Government Week
POLGOV
1343
English

2021 MAY 13 (VerticalNews) -- By a News Reporter-Staff News Editor at Politics & Government Week -- A patent application by the inventors De La Cruz, Sergio Mena (Saubraz, CH); Granai, Lorenzo (Crissier, CH); Smith, Malcolm Muir (Richardson, TX); Henry, Jerome (Pittsboro, NC), filed on October 16, 2019, was made available online on April 22, 2021, according to news reporting originating from Washington, D.C., by VerticalNews correspondents.

This patent application is assigned to Cisco Technology Inc. (San Jose, California, United States).

The following quote was obtained by the news editors from the background information supplied by the inventors: "Applications of Virtual Reality (VR) and Augmented Reality (AR) have expanded over the years. Some of the applications include interactive multi-user VR/AR over wireless networks. For example, some VR/AR applications (e.g., conferencing, video games, etc.), where the users should see a consistent VR/AR scene (e.g., a same set of visual objects in the same viewed environment), require synchronized updates to the multiple scene elements for the various users. Exacerbating the demands of synchronized updates across multiple users, some applications or users may additionally require that the VR/AR traffic be encrypted.

"The challenge with the above scenario is that real-time updates to the scene elements, made by the users, then have stringent requirements in terms of latency, bandwidth, privacy/confidentiality, synchronization of updates to the scene elements, etc. Finding systems and methods accomplishing these objectives is difficult, if not impossible."

In addition to the background information obtained for this patent application, VerticalNews journalists also obtained the inventors' summary information for this patent application: "The aspects include a method or system that includes an access point (AP) that can identify information in a first data packet that is associated with a Virtual Reality (VR) session. The AP may then identify the information in a second data packet, addressed to a first Station (STA), and in a third data packet, addressed to a second STA. Based on the identification of the information, the AP can determine that the second data packet and the third data packet are also associated with the VR session. The AP can then, based on the association of the first and second data packets with the VR session, schedule a first resource unit, in a transmission to the first STA and second STA, to include the second data packet and schedule a second resource unit, in the transmission, to include the third data packet."

The claims supplied by the inventors are:

"1. A method comprising: identifying, by an access point (AP), information in a first data packet that is associated with a Virtual Reality (VR) session; identifying, by the AP, the information in a second data packet, addressed to a first Station (STA), and in a third data packet, addressed to a second STA; determining, by the AP, that the second data packet and the third data packet are also associated with the VR session; scheduling a first resource unit, in a transmission to the first STA and the second STA, to include the second data packet; and scheduling a second resource unit, in the transmission, to include the third data packet.

"2. The method of claim 1, wherein the AP identifies the information by a deep packet inspection process.

"3. The method of claim 2, wherein the AP receives the second data packet and the third data packet within a time interval.

"4. The method of claim 3, wherein the time interval is below a predetermined threshold.

"5. The method of claim 4, wherein the predetermined threshold is less than a human's ability of perception.

"6. The method of claim 5, wherein the transmission is sent wirelessly to the first STA and the second STA.

"7. The method of claim 6, wherein the transmission sends the second data packet and the third data packet contemporaneously.

"8. The method of claim 7, wherein the second data packet is encrypted.

"9. The method of claim 8, wherein at least a part of the information is Quality of Service information that the AP receives from a Software Defined Network (SDN) server.

"10. The method of claim 1, wherein the information comprises a QoS tag, a safAU.streamID, or an X3D tag.

"11. A Access Point (AP) comprising: a radio operable to send or receive one or more signals to or from two or more Stations (STAs); a memory; a processor in communication with the memory and the radio, the processor operable to: receive a first data packet; identify metadata in the first data packet that is associated with a Virtual Reality (VR) session; identify the metadata in a second data packet addressed to a first STA; identify the metadata in a third data packet addressed to a second STA; determine that the second data packet is also associated with the VR session; determine that the third data packet is also associated with the VR session; determine that the second data packet and the third data packet are received within a predetermined time interval; schedule a first resource unit, in an Orthogonal Frequency Division Multiple Access (OFDMA) transmission to the first STA and the second STA, to include the second data packet; schedule a second resource unit, in the OFDMA transmission, to include the third data packet; and wirelessly send the OFDMA transmission to the first STA and the second STA.

"12. The AP of claim 11, wherein the AP identifies the metadata by a deep packet inspection process.

"13. The AP of claim 11, wherein the predetermined time interval is less than a human's ability of perception.

"14. The AP of claim 11, wherein the OFDMA transmission sends the second data packet and third data packet contemporaneously.

"15. The AP of claim 11, wherein the metadata comprises a QoS tag, a safAU.streamID, or an X3D tag.

"16. A basic service set comprising: a first Access Point (AP) operable to: receive a first data packet; identify metadata in the first data packet that is associated with a Virtual Reality (VR) session; identify the metadata in a second data packet addressed to a first STA, wherein the second data packet comprises a VR scene update; identify the metadata in a third data packet addressed to a second STA, wherein the third data packet also comprises the VR scene update; determine that the second data packet is also associated with the VR session; determine that the third data packet is also associated with the VR session; determine that the second data packet and the third data packet are received within a predetermined time interval; schedule a first resource unit, in an Orthogonal Frequency Division Multiple Access (OFDMA) transmission to the first STA and second STA, to include the second data packet; schedule a second resource unit, in the OFDMA transmission, to include the third data packet; and wirelessly send the OFDMA transmission to the first STA and the second STA; the first STA operable to: wirelessly receive the OFDMA transmission; and update a first VR scene, displayed in a first user interface of the first STA, with the VR scene update; the second STA operable to: wirelessly receive the OFDMA transmission; and contemporaneously with the update of the first VR scene, update a second VR scene, displayed in a second user interface of the second STA, with the VR scene update.

"17. The basic service set of claim 16, wherein the first AP identifies the metadata by a deep packet inspection process.

"18. The basic service set of claim 17, wherein the predetermined time interval is less than a human's ability of perception.

"19. The basic service set of claim 18, wherein the OFDMA transmission sends the second data packet and the third data packet contemporaneously.

"20. The basic service set of claim 19, wherein the metadata comprises a QoS tag, a safAU.streamID, or an X3D tag."

URL and more information on this patent application, see: De La Cruz, Sergio Mena; Granai, Lorenzo; Smith, Malcolm Muir; Henry, Jerome. Increasing Synchronization Of Virtual Reality Scene Elements With Software Defined Network (Sdn) Originated Information. Filed October 16, 2019 and posted April 22, 2021. Patent URL:
http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PG01&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.html&r=1&f=G&l=50&s1=%2220210120507%22.PGNR.&OS=DN/20210120507&RS=DN/20210120507

Keywords for this news article include: Business, Software, Data Packets, Technology Companies, Cisco Technology Inc., Information Technology.

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Virtual Classroom Software Market to Witness Massive Growth | Zoom, Cisco Webex Meetings, Adobe Connect, Schoology

866 words
13 April 2021
iCrowdNewswire
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English

The ' Virtual Classroom Software market' research report added by Report Ocean, is an in-depth analysis of the latest developments, market size, status, upcoming technologies, industry drivers, challenges, regulatory policies, with key company profiles and strategies of players. The research study provides market overview; Virtual Classroom Software derived key statistics, based on the market status of the manufacturers and is a valuable source of guidance and direction for companies and individuals interested in Virtual Classroom Software market size forecast, Get report to understand the structure of the complete fine points (Including Full TOC, List of Tables & Figures, Chart).

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A combination of factors, including COVID-19 containment situation, end-use market recovery & Recovery Timeline of 2020/ 2021

covid-19 scenario

Market Behavior

End Industry Behavior

Expected Industry Recovery Timeline

Expected Key Dynamic

Business Impact Horizon

Fast recovery – Opening of economy by Q2 2020

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Gradual recovery – Opening of economy by Q3 2020

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Partial recovery – Partial opening of economy by Q3 2020

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Slow recovery – Opening of economy extended till Q4 2020 / Q1 2021

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A systematic step framework for How to Tackle The Situation… “MITIGATE” | “SUSTAIN” | “GROW”: Business Strategy Recovery, Scenario and Planning

Key Segments Studied in the Global Virtual Classroom Software Market

Professional Key players:

Zoom, Cisco Webex Meetings, Adobe Connect, Schoology, Blackboard, Panopto , Top Hat, LearnCube, BigBlueButton, Schoology, Blackboard, Saba Cloud, Thought Industries, Versal, Docebo LMS, SAP SuccessFactors, SkyPrep, Cornerstone OnDemand , PlayerLync, Brainier LMS, SyberWorks Training Center, PeopleFluent LMS, BlueVolt

Market Segmentation:

Segment by Type

Cloud-based

On Premise

Segment by Application

Public Schools

Private Schools

Training Institutions

Geographical Breakdown: Regional level analysis of the market, currently covering North America, Europe, China & Japan

In-Depth Qualitative Analyses Include Identification And Investigation Of The Following Aspects: Market Structure, Growth Drivers, Restraints and Challenges, Emerging Product Trends & Market Opportunities, Porter’s Fiver Forces. The report also inspects the financial standing of the leading companies, which includes gross profit, revenue generation, sales volume, sales revenue, manufacturing cost, individual growth rate, and other financial ratios. The report basically gives information about the Market trends, growth factors, limitations, opportunities, challenges, future forecasts, and details about all the key market players.

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Key questions answered: Study Explore COVID 19 Outbreak Impact Analysis

Market size and growth rate during forecast period. Key factors driving the Market. Key market trends cracking up the growth of the Market. Challenges to market growth. Key vendors of Market. Detailed SWOT analysis. Opportunities and threats faces by the existing vendors in Global Market. Trending factors influencing the market in the geographical regions. Strategic initiatives focusing the leading vendors. PEST analysis of the market in the five major regions.

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Key Points Covered in Virtual Classroom Software Market Report:

Chapter 1: Overview of Virtual Classroom Software Market: The Study Explore COVID 19 Outbreak Impact Analysis

• Definition

• Specifications

• Classification

• Applications

• Regions

Chapter 2: Market Competition by Players/Suppliers: Detailed Overview of COVID 19 Outbreak Impact Analysis

• Manufacturing Cost Structure

• Raw Material and Suppliers

• Manufacturing Process

• Industry Chain Structure

Chapter 3: Sales (Volume) and Revenue (Value) by Region: Detailed Overview of COVID 19 Outbreak Impact Analysis

• Sales

• Revenue and market share

Chapter 4, 5 and 6: Virtual Classroom Software Market by Type, Application & Players/Suppliers Profiles: Detailed Overview of COVID 19 Outbreak Impact Analysis

• Market Share by Type & Application

• Growth Rate by Type & Application

• Drivers and Opportunities

• Company Basic Information

Chapter 7, 8 and 9: Virtual Classroom Software Manufacturing Cost, Sourcing & Marketing Strategy Analysis: Detailed Overview of COVID 19 Outbreak Impact Analysis

• Key Raw Materials Analysis

• Upstream Raw Materials Sourcing

• Marketing Channel

Chapter 10 and 11: Virtual Classroom Software Market Effect Factors Analysis and Market Size (Value and Volume) Forecast: Detailed Overview of COVID 19 Outbreak Impact Analysis

• Technology Progress/Risk

• Sales Volume, Revenue Forecast (by Type, Application & Region)

Chapter 12, 13, 14 and 15: Virtual Classroom Software Market Research Findings and Conclusion, appendix and data source

• Methodology/Research Approach

• Data Source (Secondary Sources & Primary Sources)

• Market Size Estimation

……..and view more in complete table of Contents

Continued….

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Local Sports
Orange trio invited to NFL combine; VIRTUAL EVENT: Former; Syracuse player Cisco, Melifonwu, Williams selected ahead of draft

JOSH ST. CROIX; ; jstcroix@wdt.net
305 words
4 March 2021
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English

Andre Cisco, Ifeatu Melifonwu, and Trill Williams will represent the Syracuse University football team at the virtual 2021 NFL Scouting Combine.

The NFL will not host a traditional draft scouting event due to its COVID-19 health and safety protocol, but the trio of Orange defensive backs were among the formal list of invited prospects released by the league Tuesday.

The NFL Draft is scheduled to begin on April 29.

Cisco and Melifonwu have been forecasted as potential second or third-round picks in recent mock drafts, while Williams is projected mostly as a possible day-three pick between rounds 4-7.

Cisco hauled in 13 interceptions in 24 career games at SU and finished the season as the active FBS leader and fourth in Orange history despite missing most of 2020 with a torn ACL. The ball-hawking safety is the only SU freshman to garner All-America honors.

Melifonwu ranked sixth in the ACC in passes defended (10) and fifth in pass breakups (nine) to claim AP All-ACC Second Team status and an invite to the Senior Bowl. He and redshirt freshman Garrett Williams combined to make the seventh-best cornerback tandem in the nation this past season, according to Pro Football Focus College.

Trill Williams logged 93 tackles, four interceptions, three forced fumbles and three touchdowns - scoring on a fumble recovery, a lateral following an interception, and a blocked punt - in 28 career games at SU.

Duke tight end Jake Marwedem, left, is tackled by Syracuse defensive back Ifeatu Melifonwu while running with the ball during the third quarter of an Oct. 10 game at the Carrier Dome in Syracuse. Rich Barnes/USA TODAY Sports

Document WATERTWN20210304eh340000a

Search Summary

Text	(hd=cisco) and wc>100 and hd=(virtual real estate or virtual properties or digital real esate or digital real assets or digital properties or metaverse properties or digital plots or virtual plots or virtual land or virtual reality platform or manufacturing simulation or virtual simulation or digital twins or virtual manufacturing or immersive learning or mixed-reality learning or metaverse learning or VR learning or AR learning or VR training or virtual recruitment or 3d training or training metaverse or virtual retail or virtual shopping or virtual clienteling or omnichannel shopping or humanising digital retail or immersive virtual stores or 3d virtual store or metaverse shopping or virtual clothing or virtual goods or gaming or digital avatar or digital character or virtual game or 3D avatars or virtual reality or interoperable VR space or digital financial ecosystems or metaverse wallets or robo advisory or virtual financial data or digital bank branches or digital touchpoint or blockchain wallets or digital wallets or digital wedding or virtual wedding or virtual event or virtual concert or virtual theme park or virtual classroom or virtual learning or virtual school or immersive learning or metaverse)
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