

世界首例 V2X “三跨” 互联互通应用展示完美谢幕

The world's first V2X "three-span" interconnection application shows a perfect curtain call

11月4日-8日中国汽车工程学会年会暨展览会（SAECCE2018）期间，中国智能网联汽车创新联盟、IMT-2020（5G）推进组 C-V2X 工作组、上海国际汽车城（集团）有限公司在上海汽车博览公园共同举办了 V2X “三跨” 互联互通应用展示活动（‘Three Layers’ Interoperability V2X Application Demonstration，以下简称“V2X “三跨” 展示”）实现了世界首例跨通信模组、跨终端、跨整车的互联互通。

November 4-8: During the annual meeting and exhibition of SACCE2018, China Intelligent Networking Automotive Innovation Alliance, IMT-2020 (5G) Promotion Group C-V2X Working Group, Shanghai International Automobile City (Group) Co., Ltd. in Shanghai Automobile Expo Park Co-hosted the V2X "Three-Span" Interconnection Application Showcase ('Three Layers' Interoperability V2X Application Demonstration, hereinafter referred to as "V2X "three-span" display") realized the world's first cross-communication module, cross-terminal, cross-vehicle interconnection.

参与此次活动的单位包括大唐、华为、高通共 3 家通信模组厂家，大唐、华为、星云互联、东软睿驰、金溢、SAVARI、华砺智行、千方科技共 8 家 LTE-V2X 终端提供商，北汽、长安、上汽、通用、福特、宝马、吉利、奥迪、长城、东风、北汽新能源共 11 家中外整车企业，中国信息通信研究院提供了实验

室的端到端互操作和协议一致性测试验证。

The units involved in the event include Datang, Huawei, and Qualcomm's three communication module manufacturers, Datang, Huawei, Xingyun Internet, Neusoft Ruichi, Jinyi, SAVARI, Huasheng Zhixing, Qianfang Technology, and a total of 8 LTE- V2X terminal providers, Beiqi, Changan, SAIC, GM, Ford, BMW, Geely, Audi, Great Wall, Dongfeng, Beiqi New Energy, a total of 11 Chinese and foreign vehicle companies, China Institute of Information and Communications provided end-to-end mutual laboratory Operation and protocol conformance test verification.



V2X “三跨” 展示底层采用 3GPP R14 LTE-V2X PC5 直连通信技术，使用工信部《车联网（智能网联汽车）直连通信使用 5905-5925MHz 频段的管理规定（暂行）》的工作频段；采用《合作式智能运输系统 专用短程通信 第 3 部分：网络层和应用层规范》《合作式智能运输系统 车用通信系统 应用层及应用数据交互标准》等 LTE-V2X 网络层和应用层中国标准；从 LTE-V2X 技术的不可替代性出发，选取了 7 个典型的车与车、车与路应用场景：包括车速引导、车辆变道/盲区提醒、紧急制动预警、前向碰撞预警、紧急特殊车辆预警、交叉路口碰撞预警和道路湿滑提醒。

The V2X "three-span" display uses the 3GPP R14 LTE-V2X PC5 direct connection communication technology, and uses the working frequency band of the Management Regulations (Temporary) of the 5905-5925MHz frequency band for the direct communication of the Internet of Vehicles (Intelligent Networked Vehicles). "Communication-based intelligent transportation system dedicated short-range communication Part 3: Network layer and application layer specification" "cooperative intelligent transportation system vehicle communication system application layer and application data interaction standard" and other LTE-V2X network layer and application layer Chinese standard; Starting from the irreplaceability of LTE-V2X technology, seven typical vehicle and vehicle, vehicle and road application scenarios were selected: including speed guidance, vehicle lane change/blind area reminder, emergency brake warning, forward collision warning, emergency special Vehicle warning, intersection collision warning and road slippery reminder.

本次活动首次实现了来自不同产业环节、不同国家、不同品牌之间的互联互通，充分展现了我国在全球 LTE-V2X 产业的引领地位；有助于验证我国 LTE-V2X 全协议栈标准的有效性，促进我国 LTE-V2X 产业各环节协同研发，将是推动我国 LTE-V2X 大规模应用部署和产业生态体系构建的重要一步。

For the first time, the event achieved interoperability from different industry sectors, different countries and different brands, fully demonstrating China's leading position in the global LTE-V2X industry; helping to verify the effectiveness of China's LTE-V2X full protocol stack standard. To promote the collaborative research and development of all aspects of China's LTE-V2X industry will be an important step to promote the large-scale application deployment and industrial ecosystem construction of China's LTE-V2X.

“V2X “三跨” 展示” 成功举办的消息一出，新华网等多家主流媒体对活动第一时间进行了报道，11月4日当天，V2X工作组接待了包括来自国际汽车工程师学会联合会（FISITA）的110位外籍嘉宾。11月6日活动迎来高峰，中国汽车报对现场进行了全程直播，当天直播观看达7万人次，现场接待体验嘉宾300人次，此后的几天虽然阴雨绵绵，但前来体验的嘉宾热情不减，5天以来共接待千余人次。

The "V2X "Three-Span" Exhibition" was successfully held. Many mainstream media such as Xinhua.com reported on the event for the first time. On November 4th, the V2X working group received the association from the International Association of Automotive Engineers. 110 foreign guests (FISITA). On November 6th, the event ushered in a peak. The China Auto News conducted a live

broadcast of the event. The live broadcast of the day was 70,000 person-times. The audience was 300 people on the spot. Although it was rainy and rainy for a few days, the guests who came to experience it were not enthusiastic. Less than a thousand people have received more than a thousand people in five days.

李骏

中国工程院院士、清华大学汽车工程系教授、中国汽车工程学会理事长、中国智能网联汽车产业创新联盟理事长

“目前在智能网联汽车最热的情况下，我们必须找到一个突破点，这个突破点就是 V2X，只有 V2X 才能把车与一切相连，才能真正往下一步走，实现整车智能化，最终实现无人驾驶。”

Li Jun: Academician of Chinese Academy of Engineering, Professor of Automotive Engineering Department of Tsinghua University, Chairman of China Automotive Engineering Society, Chairman of China Intelligent Network Automotive Industry Innovation Alliance

"At present, in the hottest situation of intelligent networked cars, we must find a breakthrough point. This breakthrough point is V2X. Only V2X can connect the car with everything, so that we can really go to the next step and realize the intelligentization of the whole vehicle, unmanned."

张进华

中国汽车工程学会常务副理事长兼秘书长

“联盟 V2X 工作组在年会期间举行了世界级的行业首例 V2X “三跨” 互联互通演示，得到了国内外与会嘉宾的高度认可，希望联盟各工作组聚焦全行业优势创新资源，推动联盟乃至中国智能网联汽车在世界的影响力。”

Zhang Jinhua: Executive Vice President and Secretary General of China Automotive Engineering Society

The V2X Working Group of the Alliance held the world-class V2X “Three-Span” interconnection and intercommunication demonstration during the annual meeting, which was highly recognized by the guests at home and abroad. It is hoped that the working groups of the Alliance will focus on the industry's advantages and innovation resources and promote the alliance. Even the influence of China' s intelligent networked cars in the world.”

严刚

国汽（北京）智能网联汽车研究院有限公司总经理

“作为此次活动的承办方，国汽智联与联盟一起，打造产、学、研、用多赢的科技创新平台，为不同企业产品研发提供跨领域的共性交叉基础模块和通用平台，信息安全平台、车载终端平台将为下一步 V2X 大规模互联互通保驾护航。”

Yan Gang: General Manager of Guoqi (Beijing) Intelligent Network

Automotive Research Institute Co., Ltd.

“As the organizer of this event, Guoqi Zhilian and the Alliance will build a technology innovation platform for production, learning, research and win-win, and provide cross-domain common cross-based modules and common platforms for product research and development of different enterprises, and information security. The platform and vehicle terminal platform will escort the next step of V2X large-scale interconnection and interoperability.”

姚丹亚

清华大学自动化系，系统工程研究所教授

“V2X 领域在世界发声是及其有用的，我们一定要用中国的标准，三跨采用中国的标准去实现，许多外国业内人士很惊讶中国会做这件事，因为实现“3 跨”的难度非常大。所以这件事对增加中国在世界 V2X 领域的影响力是极其重要的。”

Yao Danya: Professor, Institute of Systems Engineering, Department of Automation, Tsinghua University

"V2X is very useful in the world. We must use Chinese standards and three-spans to adopt Chinese standards. Many foreign industry insiders are surprised that China will do this because of the difficulty of achieving "three spans". Very large. So this matter is extremely important to increase China's influence in the world V2X field."

陈音

北京汽车股份有限公司汽车研究院智能化部专业总师

“这次测试是从底层打通，采用同一个标准，在很短时间内就实现了互联互通，这次测试代表了 V2X 产业新的起步。测试的成功也是标准的成功，说明了这个标准很强大。”

Chen Yin: Professional Director, Intelligent Department, Automotive Research Institute, Beijing Automobile Co., Ltd.

"This test is open from the bottom, using the same standard, and achieved interoperability in a very short time. This test represents a new start for the V2X industry. The success of the test is also a standard success, indicating that this standard is very powerful. ."

杜江凌

通用汽车中国科学研究院院长

“这次参与跨通讯模组，跨终端供应商，跨制造企业的示范，第一次实现了与来自不同国家的，不同品牌之间的互联互通对话，真正的实现了与国际接轨。是推进中国 V2X 规模化应用的重要一步。”

Du Jiangling: President of GM China Academy of Sciences

"This participation in cross-communication modules, cross-terminal suppliers, and demonstrations across manufacturing companies has achieved the first inter-connected dialogue with different brands from different countries, and truly achieved international standards. An important step in the scale application of V2X in China."

葛雨明

中国信息通信研究院主任工程师

“能够实现三个不同层面的互联互通是一个非常好的尝试，不仅能够验证我国 LTE-V2X 标准的全协议栈有效性，也能够使产业的各个环节有效的协调衔接，为未来搭建智能网联生态体系奠定基础。”

Ge Yuming: Chief Engineer, China Information and Communication Research Institute

"It is a very good attempt to realize the interconnection of three different levels. It can not only verify the validity of the full protocol stack of China's LTE-V2X standard, but also enable the effective coordination of all links in the industry to build an intelligent network connection for the future. The ecosystem lays the foundation."

11月8日，“V2X“三跨”展示”作为本届年会的亮点活动，在闭幕式上做了精彩的活动总结，现场人头攒动，气氛热烈。闭幕式上，V2X“三跨”互联互通应用展示视频发布，将活动推向了高潮，“V2X“三跨”展示”迎来完美谢幕。

On November 8th, “V2X “Three-Span” Exhibition” was the highlight of the annual meeting. At the closing ceremony, a wonderful activity was summed up. The scene was crowded and the atmosphere was warm. At the closing ceremony, the V2X “Three-Span” interoperability application showed video release, which pushed the event to a climax. The “V2X “Three-span” display” ushered in a perfect curtain call.