BHADALE GROUP OF COMPANIES - IT AND REAL ESTATE

Apr 13 2020

Engineering Industry Products Catalogue

Bhadale IT Developers Pvt. Ltd | Bhadale Real Estate Developers Pvt. Ltd (registration due)

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Bhadale Group of Companies

Bhadale Group of Companies consists of Bhadale IT Developers Pvt. Ltd and Bhadale Real Estate Developers Pvt Ltd.

1. **Bhadale IT Developers Pvt. Ltd** is an IT and Computer Engineering company

   This company provides consultation in areas of cutting edge technologies, research outsourcing, and software consultation related to data center and related engineering practices

2. **Bhadale Real Estate Developers Pvt. Ltd** is a Real estate company

   This company provides development of Infrastructure for IT Datacenter and allied sectors. It manages the engineering design, landscaping, civil architecture, presently serving internal projects.

Bhadale Group of Companies has aggressive programs in place to serve the niche market.

Bhadale Group Engineering Division, Engineering Products department

Engineering Products department hosts various products leveraging upon latest emerging technologies. We offer scientific ways of solving the pain points of Engineering firms, research trials and allied industries that enable faster, easier and economical ways of managing the Engineering industry. We offer value added products that enable various players like researcher, scientist, trainer, and seller to get the best value from this market segment and make better profits with help of AI, automation and engineering systems that enable the user to lift heavy tasks with ease.

Below are first listed products

1. **AR/ VR / Mixed reality for augmented engineering devices system**
2. **Intelligent adaptable PLM**
3. **Digital TV home automation with Virtual AI assistant**
4. **5G enabled AI based products for cloud and IoT engineering systems**
5. **AI enabled CAD/CAM/CAE**
6. **Predictive Maintenance system**
7. **Smart grid /Micro grid intelligent gadgets**
8. **Smart Sensors for various form factors and models**

Details of the above are put in the table below

Product details

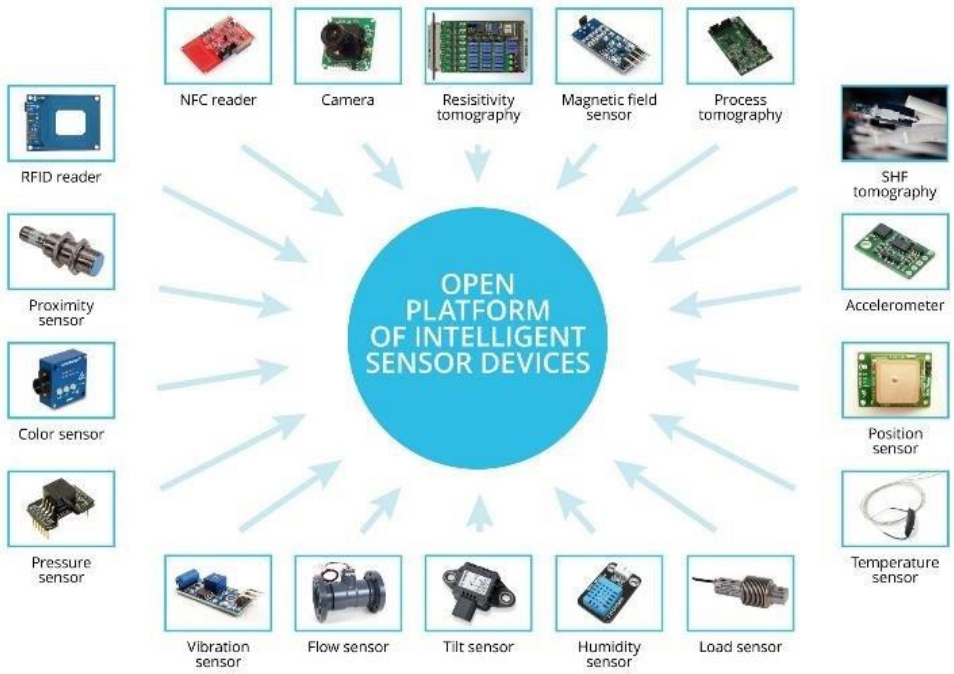
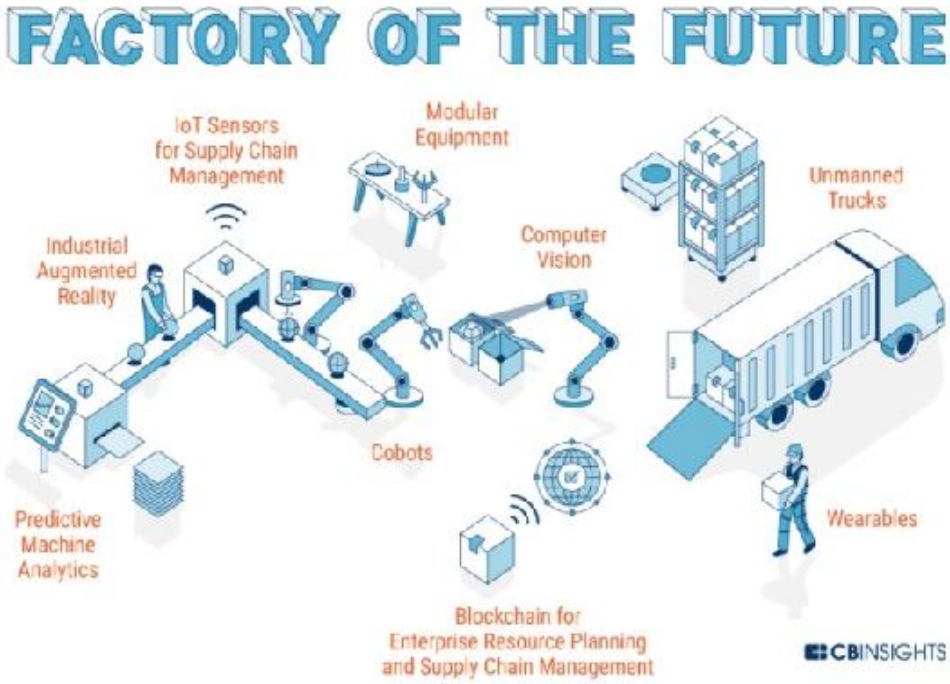
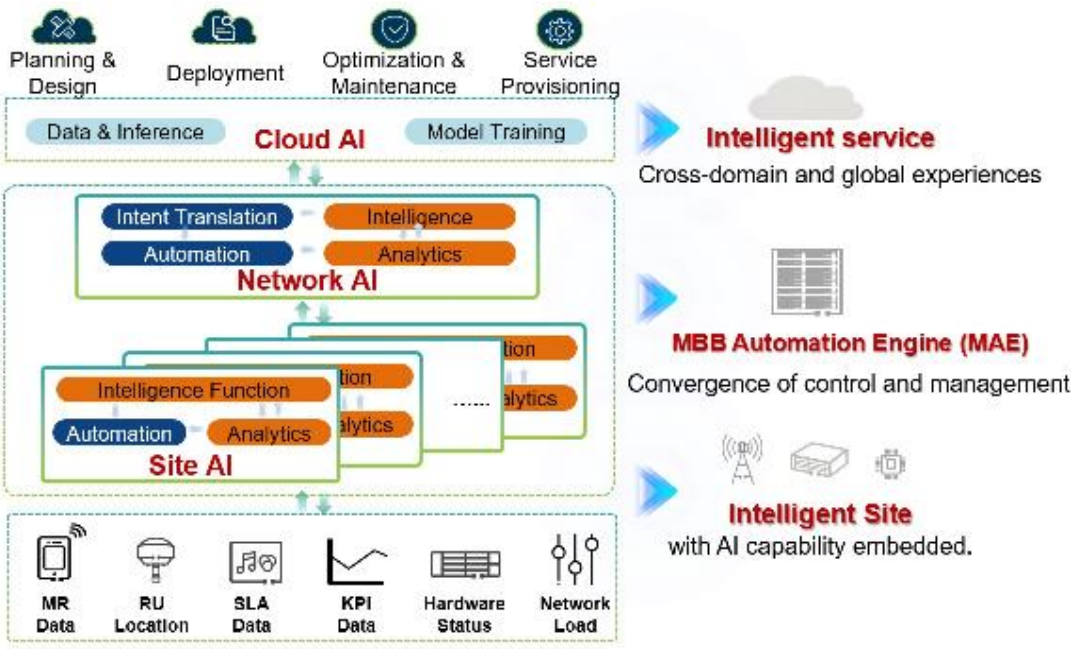


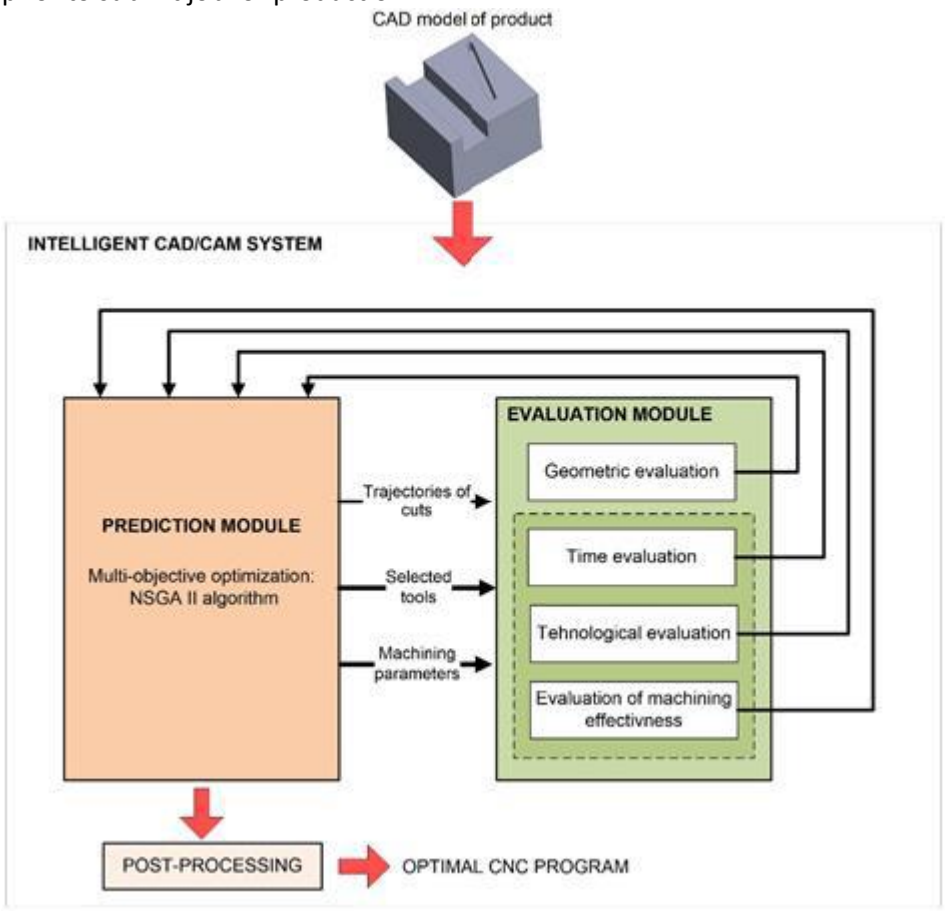
Image courtesy (The Web), no intention for copyright infringement

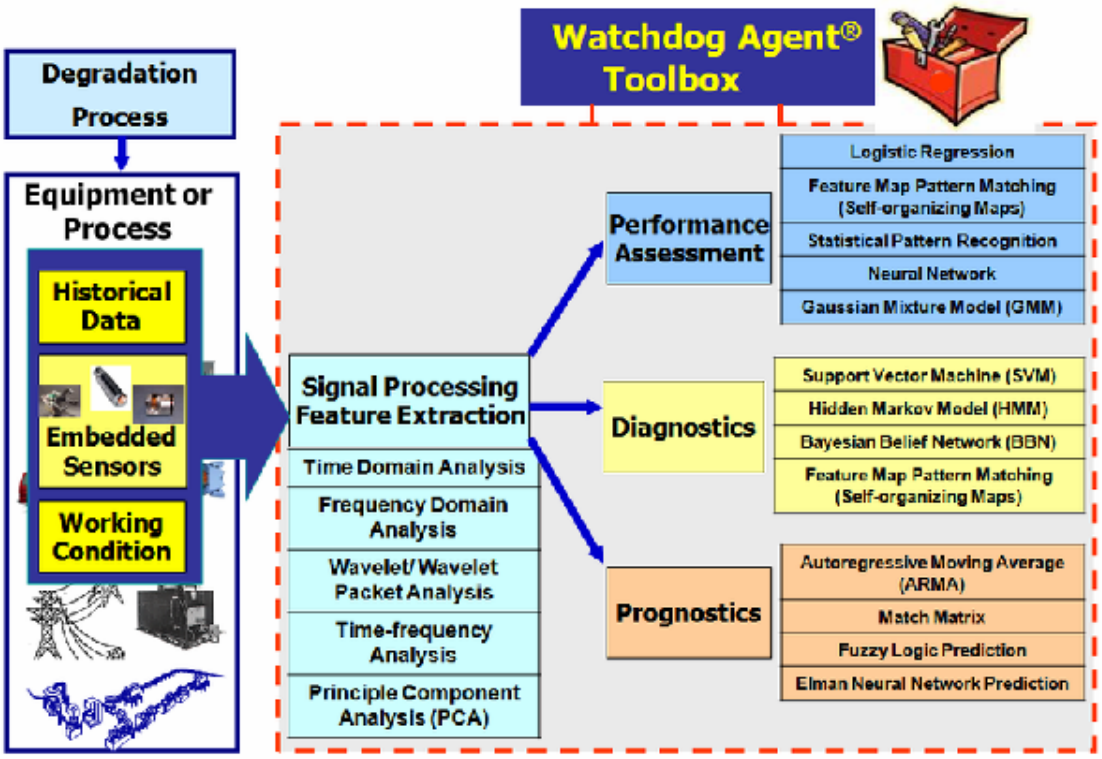
We have a large set of offers; few are mentioned below base images

Product No	Product Name	Key Product features
1	**AR/ VR / Mixed reality for augmented engineering devices system**	We offer a base level of integrated software module package, leveraging the best of industrial augmented reality, virtual reality, and mixed reality frameworks that are open, agile, and well integrated with cloud, data-centric workloads. Our packages span various engineering devices for civil inspections, 4D drawings, 3D print assistance and multi disciplinary engineering function validations and AI based intelligent visual management for audio, video systems and enhanced capabilities of utilities that help users, technicians, engineers and review teams to get better information of the unit and its ambient environment, & enabling better insights  Image source and further details available at Ref 1.

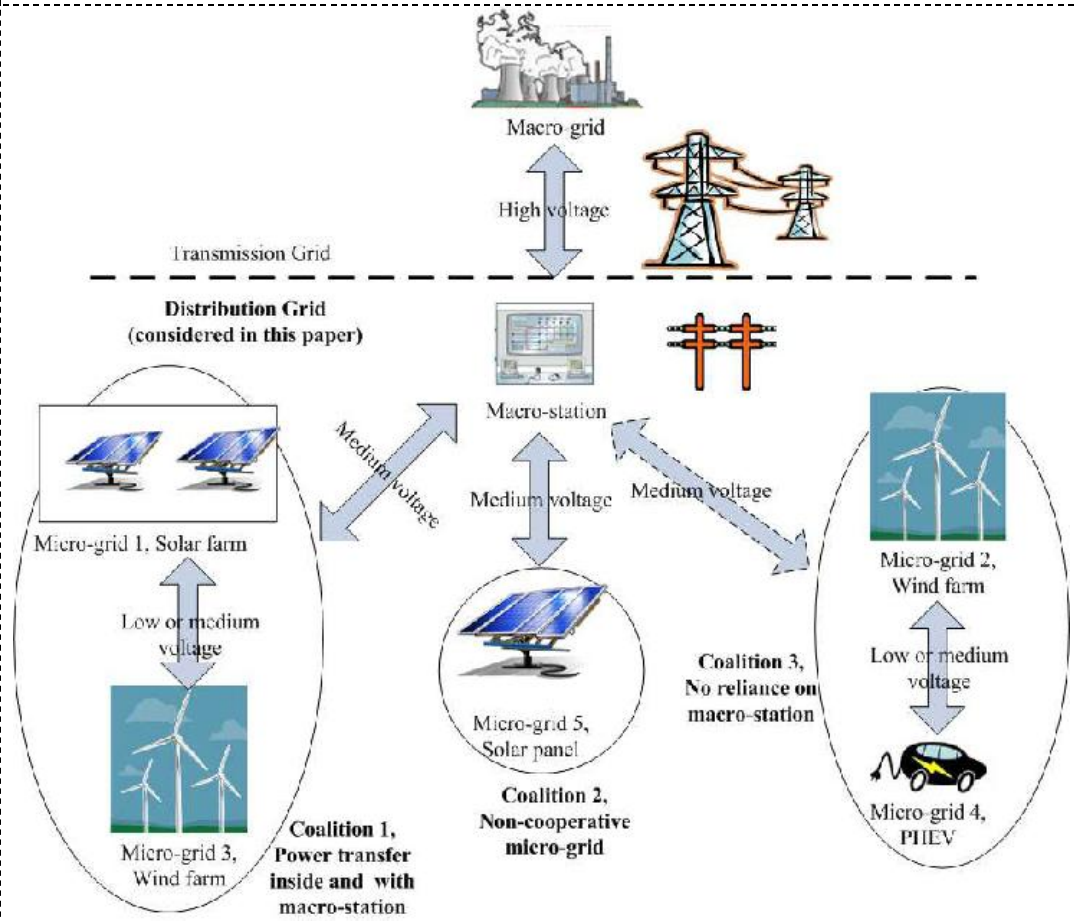
2	**Intelligent adaptable PLM**	Our product lifecycle management base package offers an integrated approach right from raw material intake, intelligent ordering (intra, inter departments), master data management, availability and traceability of inventory for right time, right material and right resources. We offer flexible, easily orchestrated virtual platform that you can build your own product development pipeline that gets its feeds from plug and play container management digital platform. We offer overlay on existing or new green field project assistance upgrading and sun-setting legacy processes. Current PLM offers great danger for providers who stay on the side of Manufacturing technology highway. Focus should be on business strategy and process transformation with flexible planning, scheduling and production is absolutely important in line with Industry 4.0 base standards  Picture credit CBInsights article. Ref 2.
3	**Digital TV home automation with Virtual AI assistant**	We offer dealer based package with value add on that will allow better telemetry, data acquisition and plug-in modules to the cloud, or your personal assistant that enables intelligent routing and alerting to any subscriber and enable any high risk thefts, dangers, or abnormal operations across any set units. Below is a figure of Control 4 suite, that offers one viable solution for home automation

		 Please refer Ref 3 for more details
4	**5G enabled AI based products for cloud and IoT engineering systems**	In partnership with industry leaders in Telecom, AI, cloud and IoT we offer an integrated framework and package that offers AI enabled 5G based automated provisioning, asset management, edge intelligence, big data processing interfaces and cross-domain intelligent framework, templates, code base, No SQL databases, IDE, open standards and integrated digital platform that enables better and smarter home, smarter factory, smarter city, and smarter living. Below is an image that shows how one leader offers intelligent services  Image source: Huawei Launches the Evolution Strategy for 5G-oriented Wireless Target Network For more information please refer Ref 4

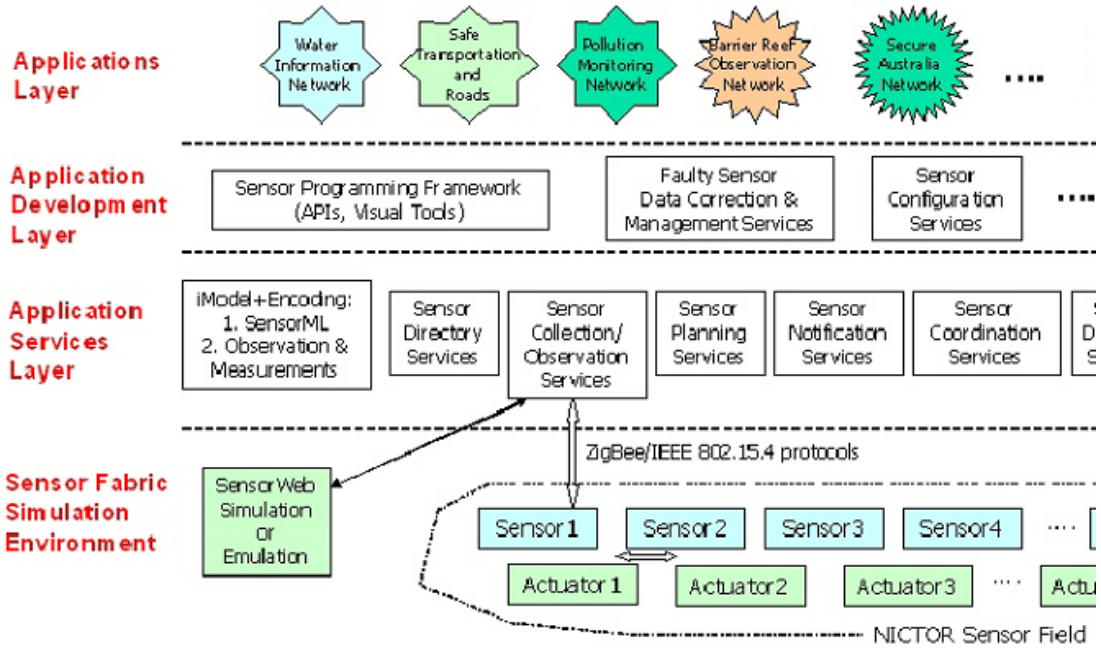
5	**AI enabled CAD/CAM/CAE**	We offer AI based algorithms, software interfaces to industry standard CAD/ CAM products. We offer intelligent databases, intelligent evaluation of the process by comparing it with the engineering drawings, precise metrics, angels, and any deviations are routed to suitable displays and logs. It offers better insights to the CAD Engineer in identifying issues early on that enable errors are not propagated. We offer several software modules that can assist the CAM / CNC programming data feedbacks and apply ML to learn the issues for predicting issues in CAD diagrams that might pose risks later on. We offer suitable databases to store engineering diagrams , and precise data from various feeds that enable better decisions prior to submit job for production  Model of an intelligent CAD/CAM system. Above figure offers one intelligent model that we have adopted. For more details refer Ref 5.
6	**Predictive Maintenance system**	We have base profile for intelligent system maintenance using AI / ML and solid data acquisition and analysis tools. We leverage on various industry framework, engineering standards, AI / ML models, algorithms, data structures and software modules that enable better visibility and analysis of the test unit. Prognosis, Diagnosis and performance analysis are offered that enable better visibility into the issues and risks that allow prediction of the system. IMS Watchdog Agent® is a collection of intelligent software tools developed by the IMS Center that can be customized for monitoring equipment and systems in many diverse applications



For more details of the image please refer Ref 6

7	**Smart grid /Micro grid intelligent gadgets**	

For more details about image, please refer Ref 7.

		We offer base modules for software, hardware and network parts of the micro grid system. We have interfaces, solution kits, required electronic / electrical part configuration that are reliable and are industrial standards approved from IEEE, NIST and have 5G protocols integration features. We offer low power devices, nano sensors, MEMS and many more synthetic systems that enable better and easier integration with the legacy and smart grid systems. Along with this our solution offers cooperative management of the unit micro cells, intelligent failover system, remote fault analysis and suggest appropriate measures for speedier recovery. We offer various mini-models that enable plug and play features
8	**Smart Sensors for various form factors and models**	We offer various models and sensor frameworks from industry leaders for various protocols like MQTT, and various interfaces for cloud, private networks etc. One model is the NICTA Open SensorWeb Architecture (NOSA) which combines a Service Oriented Architecture and WSNs using the services specified in the Sensor Web Enablement from the OpenGIS Consortium. Figure shows NOSA and its components. There are 4 layers: Sensor Fabric, Application Services, Application Development and Applications  For more details of the image and framework, please refer Ref 8. We also design frameworks using “Sensor Open group Architecture framework” that can be used for IIoT systems that use TOGAF cloud and enterprise continuum. We extend our offer for sensors like MEMS, nanosensors and biological based sensors that work along with existing electronic sensors. Our sensors can be used for IoT, IIoT, smart city, smart factory and various smart applications for home and industrial purposes.

References

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Ref 2. https://www.cbinsights.com/research/future-factory-manufacturing-tech-trends/?utm_source=Auto+Tech+Newsletter&utm_campaign=dd62eaf9f3-AutoNL_04_08_2018&utm_medium=email&utm_term=0_7b09f1b645-dd62eaf9f3-89744013

Ref 3. https://www.the-ambient.com/guides/control4-guide-features-compatibility-1526

Ref 4. https://www.globenewswire.com/news-release/2018/11/26/1657057/0/en/Huawei-Launches-the-Evolution-Strategy-for-5G-oriented-Wireless-Target-Network.html

Ref 5. Klancnik, Simon & Brezocnik, M. & Balic, J.. (2016). Intelligent CAD/CAM system for programming of CNC machine tools. International Journal of Simulation Modelling. 15. 109-120. 10.2507/IJSIMM15(1)9.330.

Ref 6. https://www.nsf.gov/pubs/2002/nsf01168/nsf01168xx.htm

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Ref 7. Saad, Walid & Han, Zhu & Poor, H. Vincent & Başar, Tamer. (2012). Game-Theoretic Methods for the Smart Grid: An Overview of Microgrid Systems, Demand-Side Management, and Smart Grid Communications. IEEE Signal Processing Magazine. 29. 86-105. 10.1109/MSP.2012.2186410.

Ref 8. Koga, Ivo & Medeiros, Claudia & Branquinho, Omar. (2011). Handling and Publishing Wireless Sensor Network Data: a hands-on experiment.

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