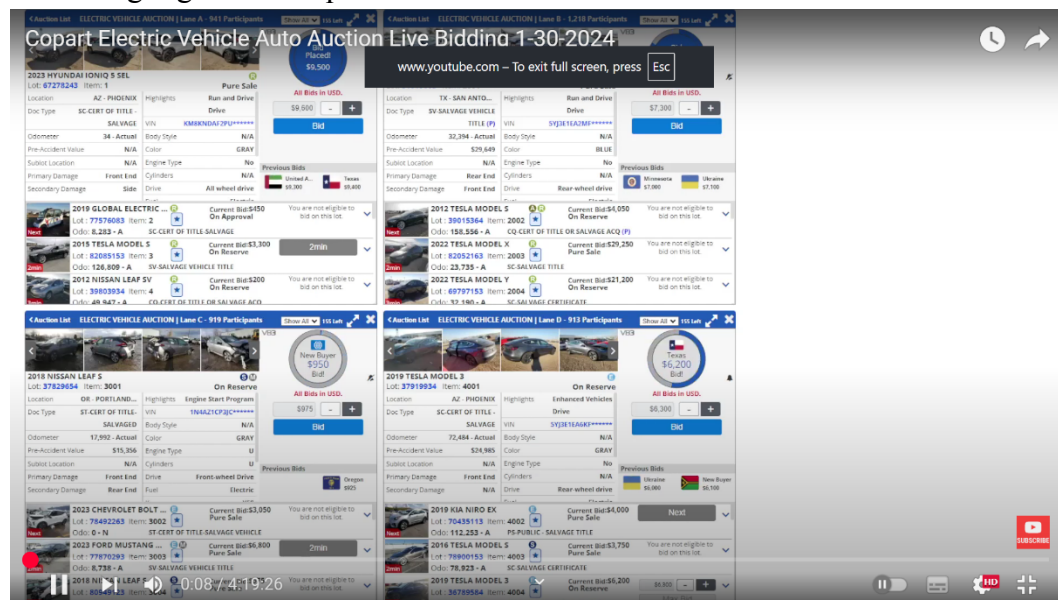


Collection of technical information on auction-based sales of electric vehicles

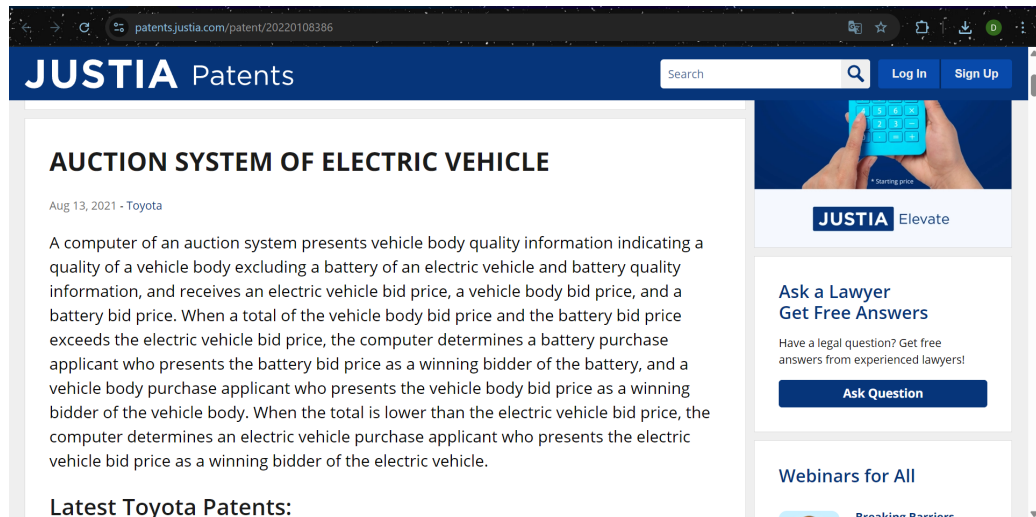
1. YouTube: COPART EV Auctions – Electric Car Bidding

- **YouTube:** <https://www.youtube.com/watch?v=qaON9EuYFqc>
- **Time:** 0:10–0:40
- **Product Name:** COPART EV Auction Interface
- **Company Name:** Copart, Inc.
- **Description:** Copart's electric vehicle auction listings offer in-depth component breakdowns (such as battery condition and body damage) and support valuation-based bidding. The technology principle of valuing each component of an electric vehicle individually is in line with this.
- **Visual Evidence:** Displays live EV unit auctions, with details on the highlights and requirements of each item.



2. Toyota EV Auction System (Justia Patents - US20220108386)

- **URL:** <https://patents.justia.com/patent/20220108386>
- **Time:** Document-based evidence
- **Product Name:** EV Auction System
- **Company Name:** Toyota Motor Corporation
- **Description:** Toyota's creation of a multi-bid electric vehicle auction system is confirmed by its reflection of the Google Patents architecture.
- **Supporting Quote:** System determines the final recipient(s) by comparing a single highest bid for the entire vehicle versus the combination of highest bids for the battery and the vehicle body.



3. JP7447757B2 – EV Auction System (Toyota, Japan)

- **URL:** <https://patents.google.com/patent/JP7447757B2/en>
- **Time:** Document-based evidence
- **Product Name:** EV Auction System
- **Company Name:** Toyota Jidosha KK (Toyota Motor Corporation)
- **Description:** A Japanese patent for an EV auction system in which the winner is determined by the overall bid price and the car body and battery are auctioned either jointly or separately.
- **Supporting Quote:** An auction system for electric vehicles where the vehicle body and battery are treated independently or as a whole, and the winner is determined by total value.

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(73) 特許権者
トヨタ自動車株式会社
愛知県豊田市トヨタ町1番地
110000110
代理人 快友国際特許事務所
高橋 理
愛知県豊田市トヨタ町1番地 トヨタ自動車株式会社内
発明者 覚知 誠
愛知県豊田市トヨタ町1番地 トヨタ自動車株式会社内
発明者 大西 陽一
愛知県豊田市トヨタ町1番地 トヨタ自動車株式会社内
発明者 木村 健治

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(21) 出願番号 特願2020-168428(P2020-168428)	(73) 特許権者 000003207	(72) 発明者 木村 健治
(22) 出願日 令和2年10月5日(2020.10.5)	(74) 代理人 110000110	
(65) 公開番号 特開2022-60762(P2022-60762A)	(72) 発明者 高橋 理	
(43) 公開日 令和4年4月15日(2022.4.15)	(72) 発明者 愛知県豊田市トヨタ町1番地 トヨタ自動車株式会社内	
審査請求日 令和4年9月20日(2022.9.20)	(72) 発明者 覚知 誠	
	(72) 発明者 愛知県豊田市トヨタ町1番地 トヨタ自動車株式会社内	
	(72) 発明者 大西 陽一	
	(72) 発明者 愛知県豊田市トヨタ町1番地 トヨタ自動車株式会社内	
	(72) 発明者 木村 健治	

最終頁に続く

(54) 【発明の名称】 電気自動車のオークションシステム

(57) 【特許請求の範囲】

【請求項1】

電池を搭載した電気自動車のオークションシステムであり、

前記電気自動車の前記電池を除く車体の品質を示す車体品質情報と、前記電池の品質を示す電池品質情報とを、そのコンピュータに提供し、

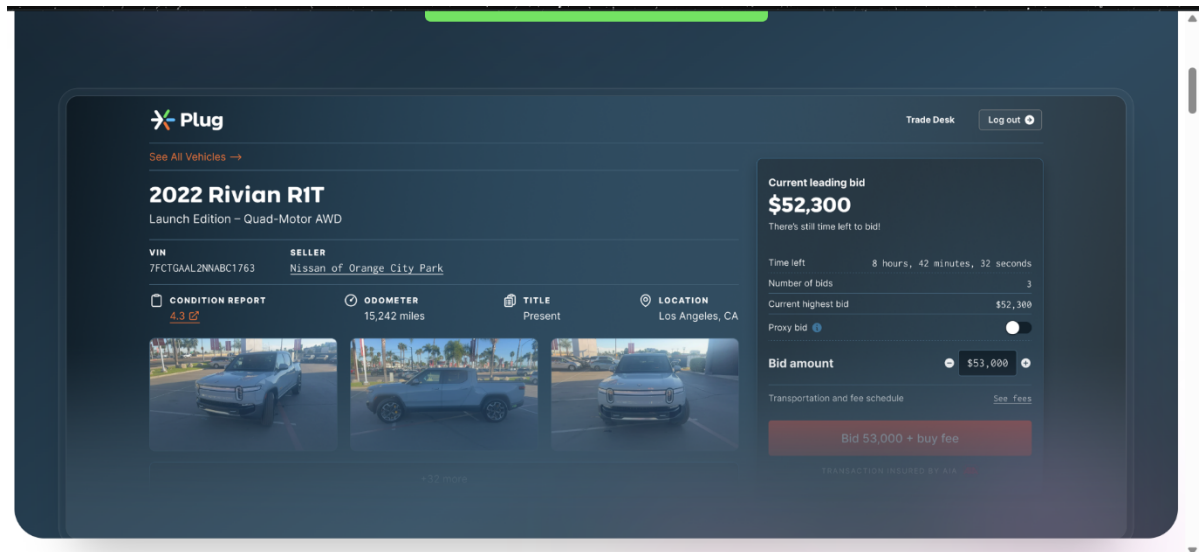
4. US11610258B2 – Advanced EV Auction Platform

- **URL:** <https://patents.google.com/patent/US11610258B2/en>
- **Time:** Document-based evidence
- **Product Name:** Electric Vehicle Auction Platform
- **Company Name:** Toyota Motor Corporation
- **Description:** It describes a platform controller that compares three concurrent offers: full car, body only, and battery. The highest value determines the winning result.
- **Supporting Quote:** The controller compares the value of the entire EV bid to the sum of the body and battery bids and chooses the higher total.

(12) United States Patent Takahashi et al.	(10) Patent No.: US 11,610,258 B2 (45) Date of Patent: Mar. 21, 2023
(54) AUCTION SYSTEM OF ELECTRIC VEHICLE (71) Applicant: TOYOTA JIDOSHA KABUSHIKI KAISHA, Toyota (JP) (72) Inventors: Masashi Takahashi, Nagoya (JP); Makoto Kakuchi, Toyota (JP); Yoichi Onishi, Okazaki (JP); Kenji Kimura, Nagoya (JP); Masakazu Habu, Toyota (JP) (73) Assignee: TOYOTA JIDOSHA KABUSHIKI KAISHA, Toyota (JP) (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days. (21) Appl. No.: 17/401,518 (22) Filed: Aug. 13, 2021 (65) Prior Publication Data US 2022/0108386 A1 Apr. 7, 2022 (30) Foreign Application Priority Data Oct. 5, 2020 (JP) JP2020-168428 (51) Int. Cl. G06Q 30/08 (2012.01) (52) U.S. Cl. CPC G06Q 30/08 (2013.01) (58) Field of Classification Search CPC G06Q 30/08 See application file for complete search history.	(56) References Cited U.S. PATENT DOCUMENTS 2009/0024266 A1* 1/2009 Bertness G07C 5/0808 701/22 2012/0037473 A1* 2/2012 Ouwenga F02B 33/38 192/84.9 2012/0130843 A1* 5/2012 Himmerick G06Q 30/08 705/26.3 2014/0164162 A1* 6/2014 Rabenold G06Q 30/08 705/26.3 2018/0218449 A1* 8/2018 Holmberg G06Q 30/08 2019/0156408 A1 5/2019 Igata et al. 2019/0156409 A1 5/2019 Igata et al. 2021/0120297 A1* 4/2021 Deshpande G06F 16/9535 FOREIGN PATENT DOCUMENTS JP 3273935 B2 4/2002 JP 2013-084199 A 5/2013 JP 2019-095988 A 6/2019 JP 2019-095990 A 6/2019 * cited by examiner Primary Examiner — Asha Puttaiah (74) Attorney, Agent, or Firm — Oliff PLC (57) ABSTRACT A computer of an auction system presents vehicle body quality information indicating a quality of a vehicle body excluding a battery of an electric vehicle and battery quality information, and receives an electric vehicle bid price, a vehicle body bid price, and a battery bid price. When a total of the vehicle body bid price and the battery bid price exceeds the electric vehicle bid price, the computer determines a battery purchase applicant who presents the battery bid price as a winning bidder of the battery, and a vehicle body purchase applicant who presents the vehicle body bid price as a winning bidder of the vehicle body. When the total is lower than the electric vehicle bid price, the computer determines an electric vehicle purchase applicant who presents the electric vehicle bid price as a winning bidder of the electric vehicle. 3 Claims, 4 Drawing Sheets

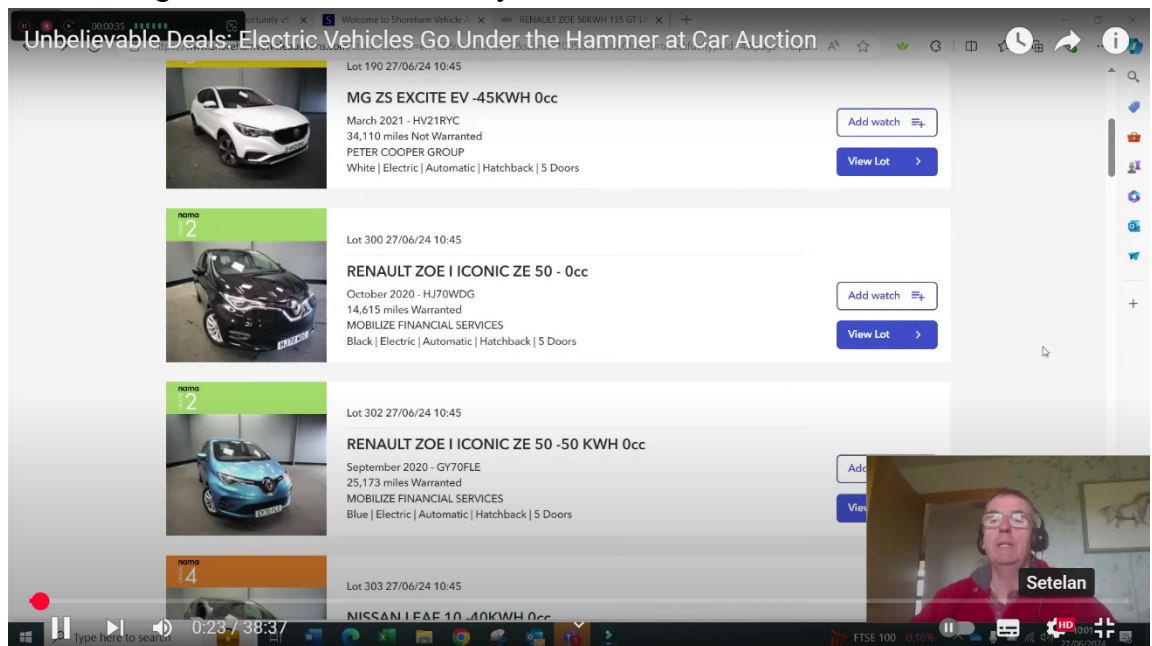
5. Plug.vin – EV-Specific Auction Platform

- **URL:** <https://www.plug.vin>
- **Time:** Website-based evidence
- **Product Name:** Plug EV Auction Platform
- **Company Name:** Plug, Inc.
- **Description:** An exclusive auction site for pre-owned EVs that prioritizes battery condition and value. The platform uniquely assesses EV value by battery and hardware separately, even if it doesn't clearly display three distinct bid options.
- **Supporting Quote:** The only wholesale auction designed specifically for EVs. Battery health, range, and software come first.



6. YouTube: Shoreham Vehicle Auctions – EV Auction Demo

- **YouTube:** <https://www.youtube.com/watch?v=aeqvwqv2mGY>
- **Time:** 0:20–0:50
- **Product Name:** EV Auction Session
- **Company Name:** Shoreham Vehicle Auctions (UK-based)
- **Description:** Shows a live auction for electric automobiles. Although the system does not clearly display separate bids for the battery and the body, it does permit unique EV configurations, which may indirectly indicate the value of individual parts.
- **Visual Evidence:** Live bid prices for various EV units, along with clear auction activity.



7. Toyota EV Auction System (Patent US20220108386A1)

- **URL:** <https://patents.google.com/patent/US20220108386A1/en>
- **Time:** Document-based evidence
- **Product Name:** EV Auction System
- **Company Name:** Toyota Motor Corporation
- **Description:** Describes an online EV auction site that takes bids for three distinct items: the entire car, the car's body, and the battery. The winner is determined by comparing the sum of the battery and body bids to the entire EV bid.
- **Supporting Quote:** Comparing the bid for the entire car with the sum of the bids for the body and battery, and receiving a bid for the entire vehicle, a bid for a body, and a bid for a battery.

 US 20220108386A1	
United States	
(12) Patent Application Publication	
TAKAHASHI et al.	
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(43) Pub. Date: Apr. 7, 2022	
(54) AUCTION SYSTEM OF ELECTRIC VEHICLE	
Publication Classification	
(71) Applicant: TOYOTA JIDOSHA KABUSHIKI KAISHA, Toyota-shi (JP)	
(51) Int. Cl. G06Q 30/08 (2006.01)	
(52) U.S. Cl. CPC G06Q 30/08 (2013.01)	
(72) Inventors: Masashi TAKAHASHI, Nagoya-shi (JP); Makoto KAKUCHI, Toyota-shi (JP); Yoichi ONISHI, Okazaki-shi (JP); Kenji KIMURA, Nagoya-shi (JP); Masakazu HABU, Toyota-shi (JP)	
(57) ABSTRACT	
A computer of an auction system presents vehicle body quality information indicating a quality of a vehicle body excluding a battery of an electric vehicle and battery quality information, and receives an electric vehicle bid price, a vehicle body bid price, and a battery bid price. When a total of the vehicle body bid price and the battery bid price exceeds the electric vehicle bid price, the computer determines a battery purchase applicant who presents the battery bid price as a winning bidder of the battery, and a vehicle body purchase applicant who presents the vehicle body bid price as a winning bidder of the vehicle body. When the total is lower than the electric vehicle bid price, the computer determines an electric vehicle purchase applicant who presents the electric vehicle bid price as a winning bidder of the electric vehicle.	
(73) Assignee: TOYOTA JIDOSHA KABUSHIKI KAISHA, Toyota-shi (JP)	
(21) Appl. No.: 17/401,518	
(22) Filed: Aug. 13, 2021	
(30) Foreign Application Priority Data	
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