in a world where everything is becoming increasingly connected and integrated with technology cars have lagged behind. but all that is changing and fast.

the automotive industry is on the cusp of a technological revolution as companies like Apple Google Amazon and Microsoft partner with car makers to bring the power of our phones and AI into the vehicle. almost all auto manufacturers have struggled with consistently delivering a great user experience that can keep pace with our phones and computers. it’s important to note how much of a pain point infotainment has been for these car companies for a long time. Really starting like early 2000s BMW started coming out with I Drive and immediately there was all kinds of issues with how to control it and the interface wasn’t user intuitive. I had a Toyota Tundra recently and that infotainment system looks almost unchanged from the one in my uncle’s 2012 Toyota Highlander. and that’s always been a point that has really hurt. Toyota and other companies like it that haven’t invested that much in the infotainment department. the pace of the smartphone and tablet sector just moves so much quicker. but some of the big tech companies are fixing that.

Apple and Google have developed their own connected car solutions that let you access navigation and messaging on your infotainment system. carplay is Apple’s way of getting inside of your car. you basically hook up your iPhone to a console or an aftermarket heads-up display and it shows you different apps that are available on your iPhone that you can use while you’re driving. you can access things like Apple Maps Apple music Pandora Spotify CNBC your podcast app and more. and it allows you to basically see a version of your iPhones that you can use while you’re driving.

Google’s version is Android auto and functions just like car play by projecting a driver friendly interface onto your infotainment screen. both systems have been around since 2014 and companies like Ford Chevrolet audi and more are integrating Google and Apple in their cars. often you’ll find car support both car play and Google’s Android auto and it seems like this is what customers want. since all they have to do is get in the car and then everything on their phone comes up right on their display and auto manufacturers they don’t have to worry about spending millions of dollars to create new in-car entertainment systems. So Toyota and Ford and all those companies are saying actually it’s really a lot better for us if we can just let Google and Apple do a lot of the heavy lifting and focus on what we do well. which is building cars not everyone is of course on board with the idea that infotainment should be equal across all cars .we’ve seen studies that show that people are willing to switch car brands for more connectivity features and so everyone wants to offer you know carplay and android auto and those things. but when you’re charging more money you want to offer a better experience which is why high-end manufacturers like BMW Mercedes want to focus on offering you know a step above what you might get in your ford or Toyota while Mercedes supports Apple and Google’s offerings and BMW has carplay both have continued to invest in their own technology .developing personal assistants to control car features. you can say things like hey Mercedes set the climate controlled 68 degrees. while also using it to control music and navigation. so while your phone may be able to very well do music and in there taking advantage of the fact that your phone can’t turn on your heat and see your phone can’t set the climate control because that’s their ecosystem. because the idea of being you know if you get really used to using that BMW software when the time comes to upgrade you’re not gonna want to switch to an Audi and learn a whole new system.

in order to power it’s personal assistant BMW turned to Microsoft. Microsoft is providing the underlying AI capabilities cognitive capabilities for automakers like BMW to create their own granted voice assistance. in the future people will be interacting with their vehicles through voice a lot of the commands are gonna be wise driven and here’s the opportunity for BMW to create a very impactful voice assistant that portrays their brand and provides very rich context specific experiences for their consumers.

unlike Apple and Google Microsoft is focused on creating the underlying tech that will support all of the different smart features in a car. we strongly believe that the automakers are in the best position to provide these experiences by themselves. of the role of technology providers like Microsoft is to support them and give them the underlying capabilities they need

Microsoft is also partnering with automakers like Volkswagen and Daimler. if you have a problem with your vehicle and you bring it to the dealership to fix. well since Dan Brown has access to all the data they can quickly forecast what could be the potential problem and speed up that repair cycle for you. a major benefit of these systems is safety tech like carplay and android auto are designed to keep drivers off their phones and focused on the road. inside Google the Android auto team has a whole lab dedicated to testing distracted driving. using the data to influence the user experience design of the platform. this is our driving simulator. we use it for testing our product in a driving context while maintaining a in controlled environment. we have participants wear eye tracking glasses. so that we can track their pupil location and measure their glances to and from the road and to the product. so we’ll have them navigate to a destination or send a text message using their voice with the Google assistant.

the driving simulator allows us to measure glance duration and gaze location. it also allows us to collect data of driving performance. so we can make sure that they are maintaining consistent and safe speed and they’re maintaining their lane position and not swerving.

right now we see about 1 in 13 drivers texting while driving and so the indication is that here.at Android auto we have an opportunity to really make a difference. voice assistance will actually play a pretty big role in changing how we interact with our devices while in the car .incorporating Google assistant into Android auto is really the fundamental piece that’s going to make this. all work what we really want to do is minimize the number of times you need to look off the road if you do need to do that. so the assistant by being predictive and putting information you’re most likely to be searching for right there. that leads to a really wonderful experience. people don’t want to be fumbling through intricate menus of all their driving they want to get to what they’re looking for right away and back to the road. we have the opportunity to really eliminate handheld phone use for driving.

Amazon is also interested in your car and has been working with a number of automakers to bring Alexa integration in a new BMW or a new Ford or a bunch of other manufacturers you can say you know Alexa what’s the weather like and they’ll use the cars to connectivity or your phone’s connectivity to answer that request. but they actually go a step further than . that there’s also Alexa skills for certain brands. so while on a genesis which is Hyundai’s luxury division. they won’t allow you to use Alexa in the car. what you can do is in your Alexa in the home? you can say Alexa start my Genesis and it will actually use that connective car service to remote start your car via voice. so it kind of instead of bringing you into the Amazon ecosystem in your car it’s bringing your car into the Amazon ecosystem that you already have set up . Amazon is also enabling features like Amazon key for cars from Volvo GM and Ford which lets packages be delivered to your car. it’s an alternative to the controversial product that gave the retailer access to your home and for older cars amazon has that covered to.

average car on the road in the United States is now over 11 years old. so the vast majority of Amazon clients are completely left behind by this revolution. and that’s where Echo Auto comes in which is Amazon standalone device to bring those Amazon connected services to your older car. and so they’re really trying to hit all possible avenues they’re working with as many manufacturers as possible and doing really what they were doing with echo the whole time which is saying yeah we’ll license it to smart speakers yeah well I submit to competitors we want Amazon echo to be part of your life no matter where you are.

eventually we may see car computers that end up running mobile OS is not all that different from our phones. Google is working on bringing the full Android operating system directly into cars so a phone isn’t needed. it’s called Android automotive and an early iteration was debuted in Volvo’s Polestar – Evi. this is Android running in the car as the embedded infotainment platform and unlike Android auto your apps and services are running on the car. so it doesn’t matter what kind of phone you have or even if you forgot your phone at home.

we took the decision two or three years ago to decouple hardware and software because our own systems never kept up with what the software companies were doing. and it was fairly evident to work with Google’s. so for us it was about making sure that we could make the interaction the interface of the customer when they get in the car the best possible.

user always had to shave between two worlds. one world was Android out of where you kind of had your broaden services and then you had the rest of the system. what we’ve seen over time as more and more functionalities move into the actual screen that seam between broad and device and services that Android auto provides and everything else available to kind of started to grow. so with Android automotive what it does is enables to bring the seamless experience. the third-party app developers Spotify for example NPR. they can now bring applications that they started developing originally for Android auto and mobile directly into the car having Android operate in a car could open up huge possibilities there are over two point 1 million apps in the Google Play Store and with minimal effort from the developer all of those could be available right in your car.

with Android embedded what we’re going to now is see you bring the functionality that you like so much about your phone into your car and that’s the marriage that we’re looking for. that we have a seamless integration of your life as a connected person outside the car not being interrupted when you get into the car. with such a focus on cars tech companies may completely transform our concept of what a vehicle can be. these vehicles are gonna be your office on wheels are your living room on wheels today. when you are talking a commute is really a bad experience that people go through where in the future every minute can be a very productive experience if you want to do some work while you’re moving or it could be a great entertainment experience. and so Microsoft in our role as the technology provider is partnering deeply with automakers. so together we can accelerate and provide these innovative services faster to the market. because no one person can bring it all and we truly believe us coming together I can bring this value at a much more rapid pace.

1. lagged behind – отстающий
2. automotive industry – автомобилестроение
3. is on the cusp – находится на перепутье
4. consistently delivering – последовательная поставка
5. can keep pace – может идти в ногу
6. how much of a pain point – сколько болевых точек
7. you basically hook up your iPhone – ты просто подключаешь свой iPhone
8. an aftermarket heads-up display –
9. get in the car – садиться в машину
10. heavy lifting and focus on – тяжелый подъем и сосредоточиться на
11. charging more money – взимая больше денег
12. high-end manufacturers – производители высокого класса
13. control car features – управлять функциями автомобиля
14. there taking advantage of the fact – воспользоваться тем фактом.
15. in order to power it’s – для того, чтобы зарядить его
16. underlying AI capabilities – основные возможности AI
17. cognitive capabilities – когнитивные способности
18. granted voice assistance – предоставляется голосовая поддержка
19. gonna be wise driven – буду мудрым водителем
20. impactful voice assistant – эффективный голосовой помощник
21. portrays their brand – изображает их бренд.
22. underlying tech – базовая технология
23. can quickly forecast – может быстро спрогнозировать
24. repair cycle – цикл ремонта
25. a major benefit – главное преимущество
26. dedicated to testing distracted driving – посвящён тестированию отвлечённого вождения
27. a driving context – контекст вождения
28. participants wear eye tracking glasses – участники надевают очки для слежения за зрением
29. their pupil location – местонахождение их учеников
30. measure their glances to – измерять их взгляды на
31. gaze location – расположение взгляда
32. driving performance – ходовые характеристики
33. maintaining consistent – поддержание последовательности
34. not swerving – не поворачивая
35. incorporating Google assistant – включая ассистента Google
36. fumbling through intricate menus – пробираясь через замысловатые меню
37. really eliminate handheld phone use – действительно устранить использование портативных телефонов
38. what’s the weather like – какова погода
39. go a step further than – пойти на шаг дальше
40. skills for certain brands – навыки для определенных брендов
41. while on a genesis –
42. it kind of instead – вместо этого
43. controversial product – спорный продукт
44. average car – обычный автомобиль
45. the vast majority – абсолютное большинство
46. left behind by this revolution – оставленные этой революцией
47. to hit all possible avenues – чтобы найти все возможные пути
48. eventually – в конце концов
49. early iteration was debuted – ранняя итерация дебютировала
50. embedded infotainment platform – встроенная информационно-развлекательная платформа
51. decouple hardware and software – развязать аппаратное и программное обеспечение
52. was fairly evident – было довольно очевидно
53. broaden services – расширение услуг
54. minimal effort – минимум усилий
55. seamless integration – безупречная интеграция
56. not being interrupted – не прерываясь
57. is partnering deeply with automakers – тесно сотрудничает с автопроизводителями
58. we can accelerate and provide – мы сможем ускорить и обеспечить
59. more rapid pace – более быстрый темп