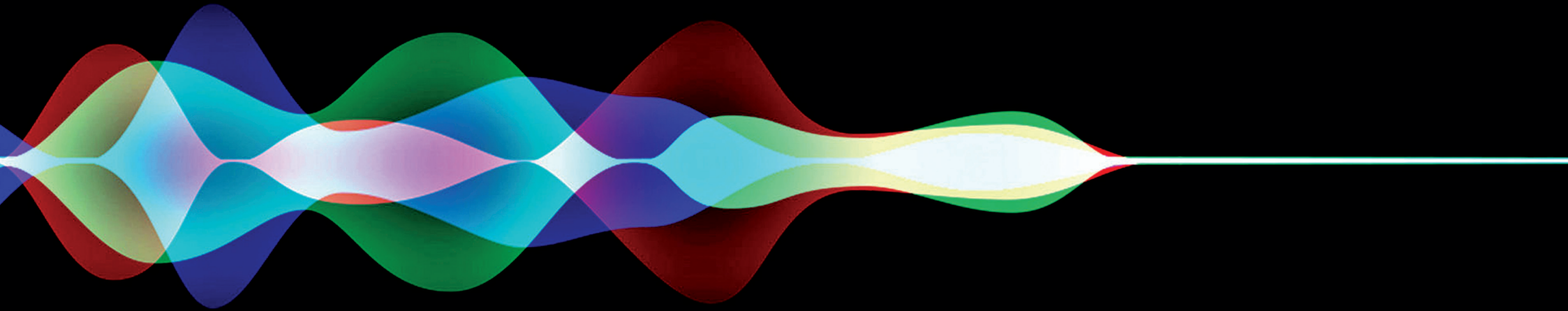*Mei Wu & Marie Sadek*

"Hey Siri!"

The rise of Apple's "beautiful victory"

"Hey Siri!"

Mei Wu & Marie Sadek

Often doubling as a sociopath with questionable humour, Siri is an artificial intelligence well associated with the Apple brand. Through its brief history of 6 years, Apple's "beautiful victory" has managed to impact social and technological possibilities. This, of course, has led to its widespread popularity, making it one of the most popular digital assistants today. However, with the rapid introduction of various other AI systems, Siri's often blaring shortcomings have led to a rapid decrease in its use, begging the question in whether the reign of Siri is finally coming to a close.

The history of Siri started as an abstract idea predicted in the 1980s by John Sculley in his concept "Knowledge Navigator". This concept describes a digital assistance device that will be able to access a large network database of hypertext information and use software agents to assist with information searching. Sculley viewed the building of the Knowledge Navigator as "dependant on further development of important technologies", such as enhanced databases, information retrieval and, of course, advances in artificial intelligence

research. 24 years later, Sculley's wish for speech recognition and synthetic speech was introduced to the world through Siri. Contrary to popular belief, Apple did not, in fact, invent Siri. This credit solely belongs to Dag Kittlaus and his SRI International team, who developed the DARPA-funded CALO project that produced the Siri technology as its offshoot.

In 2010, Apple purchased Siri for more than $200 million before it was sold to its rival Verizon as an Android exclusive product. In the same year, Apple worked in collaboration with Nuance Communications to develop Siri's speech recognition engine using sophisticated machine learning techniques, which included convolutional neural networks, long short-term memory and gated recurrent units. This enables Siri to perform a wide array of task for its users, allowing for a relatively hands-free experience; barring the need to hold down the home button to activate Siri.

In 2011, Siri was introduced as an integrated feature of the new iPhone 4s. Being the first of it's kind, Siri quickly gained traction.

In fact, studies conducted in 2012 on the usage of Siri shows that 53% of people worldwide use Siri, while 65% of these people are from Apple-supported countries. Amongst these users, the majority are male topping at 61%, which is approximately 14% less than female users. 70% of users are between the ages of 40 - 49, this is closely followed by ages 50+ at 67%, then the ages 20 and below at 60%, and ages 30 - 39 at 55% with the ages 20 - 29 at the lowest of only 50%.

In 2015, the release of the iPhone 6s and the iOS 9 update saw the improved development of the Siri technology at its core. In these improvements, Siri is enhanced to provide consumers with a more dynamic hands-free experience by allowing Siri to be verbally activated with voice recognition of the phrase "Hey Siri". Siri was also combined with the advanced search engine to provide users with an operating system that is contextually aware of time and location-based information.

Although these improvements may have continually ensured Siri's market leadership, the increased introduction of various better-equipped AI systems has led to a rapid decrease in Apple's AI usage. In fact, studies conducted between May 2016 and May 2017 show a rapid loss of 7.3 million users annually. Comparing these figures with Apple's rivals Cortana, Google and Alexa, data results show that though they have fewer users, unlike Siri, they are rapidly gaining more each year.

Apple claims that "Siri's performance is improved the more one uses it", stating "as it gets use to the accent and other characteristics of the users' voice" it should become a seamless interaction between the user and product. As technological advances continue to transform the market, time will only tell if Apple will be able to maintain a secure market leadership for Siri within the marketplace, or if her reign is finally coming to an end.
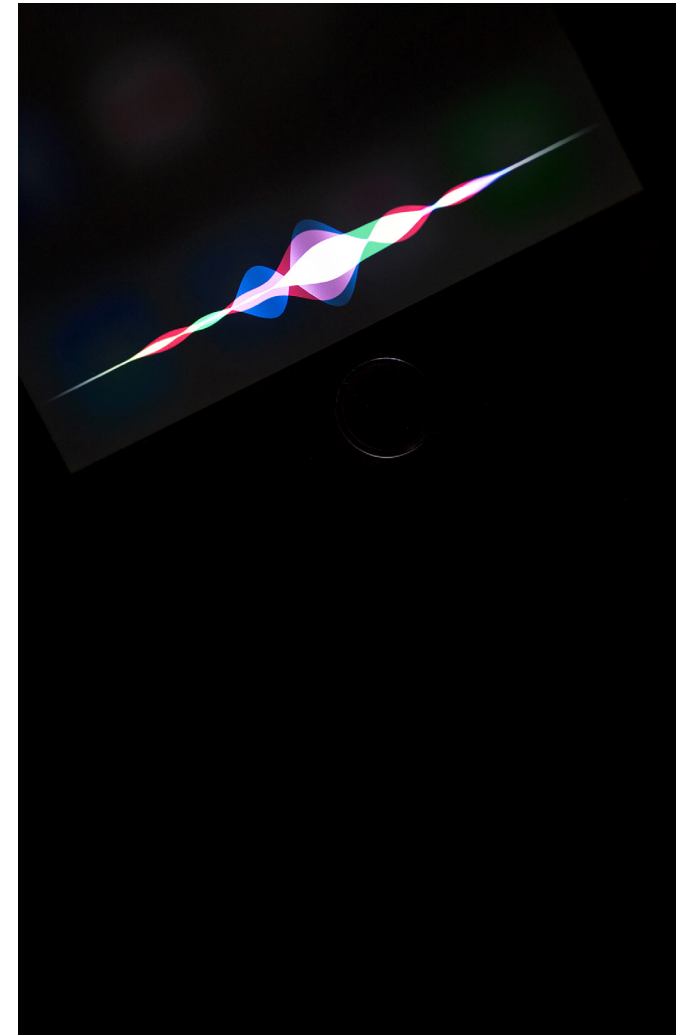
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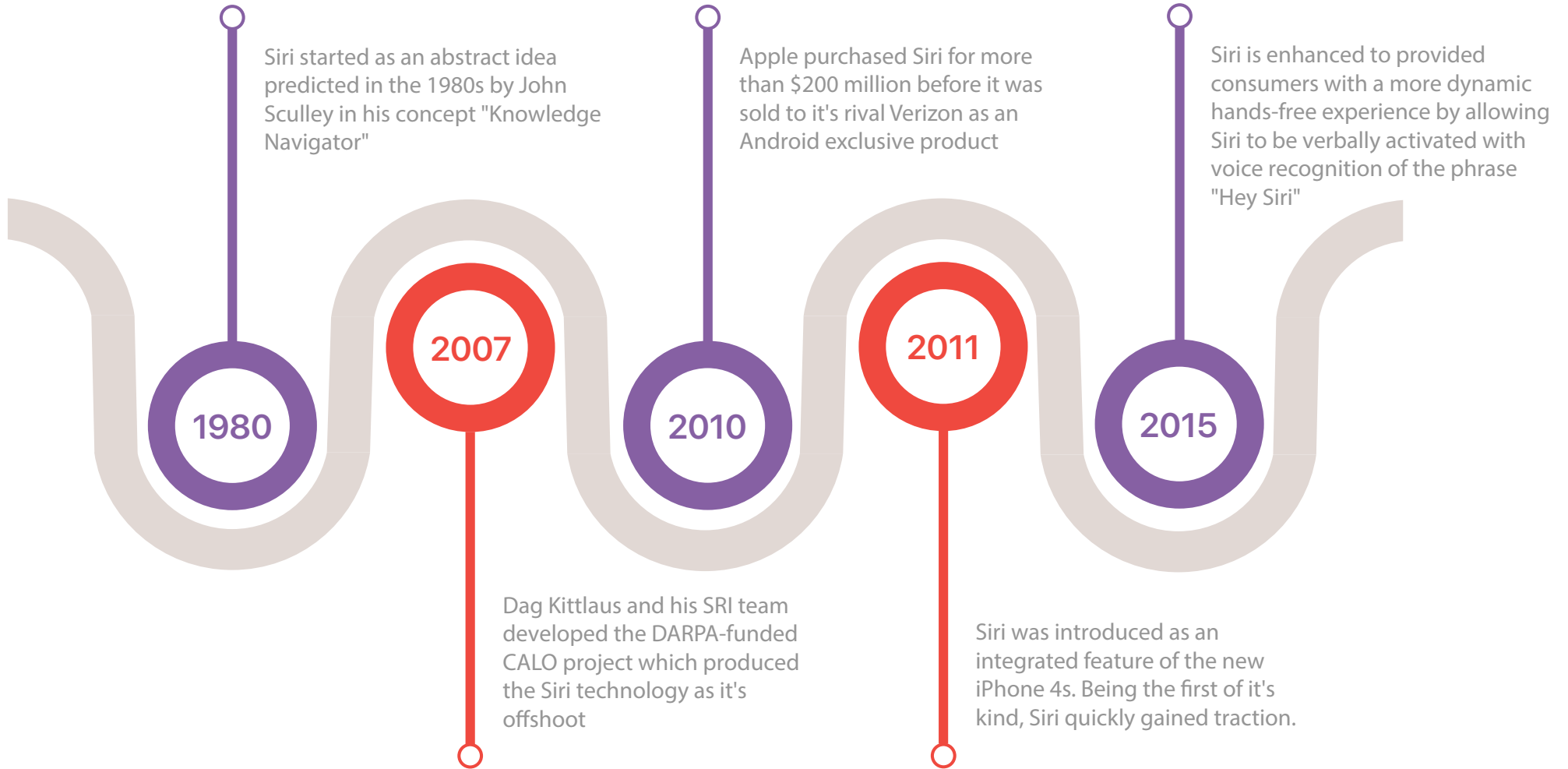Fradrich, L. (2012). *Siri vs. Windows Speech Recognition*. Retrieved October 6, from http://www.bokorlang.com/journal/61dictating.htm

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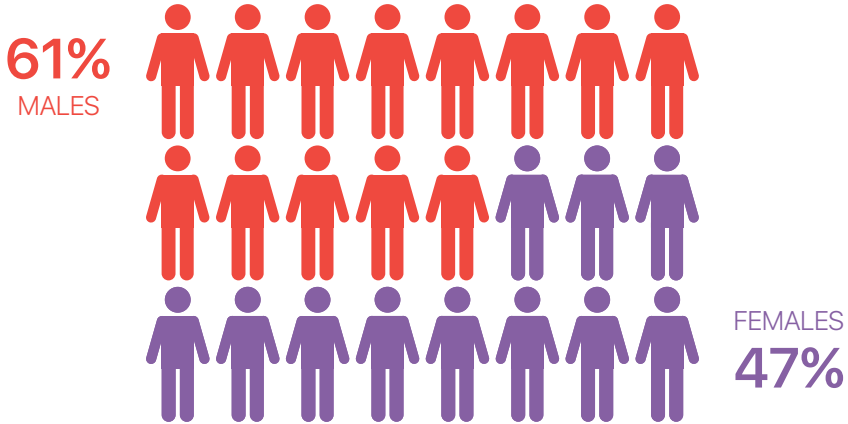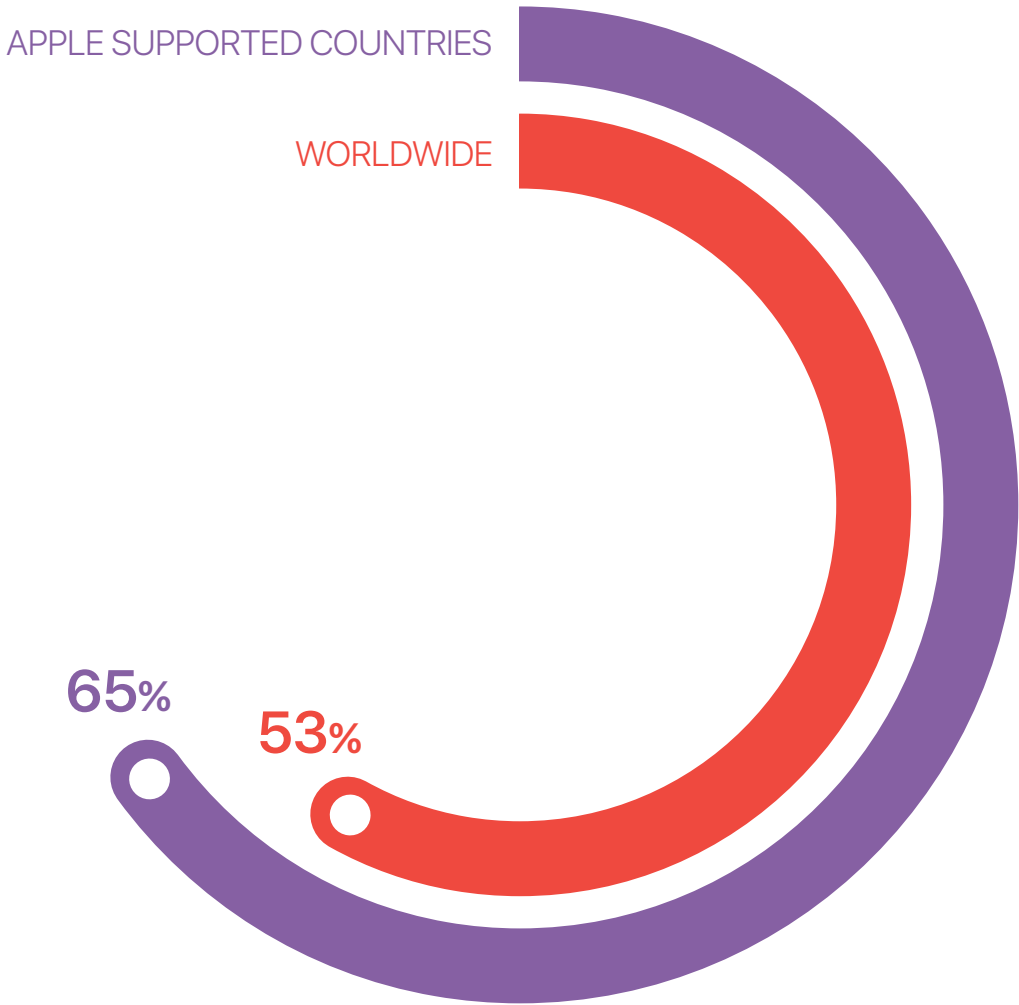
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Siri's history and development

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Siri is enhanced to provided consumers with a more dynamic hands-free experience by allowing Siri to be verbally activated with voice recognition of the phrase "Hey Siri"

2007

1980

2010

2011

2015

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The use of Siri in iPhone 4s

APPLE SUPPORTED COUNTRIES

WORLDWIDE

65%

53%

61%
MALES

FEMALES
47%

The use of Siri in iPhone 4s (agewise)

-20	**60%**
20-29	**50%**
30-39	**55%**
40-49	**70%**
50+	**67%**
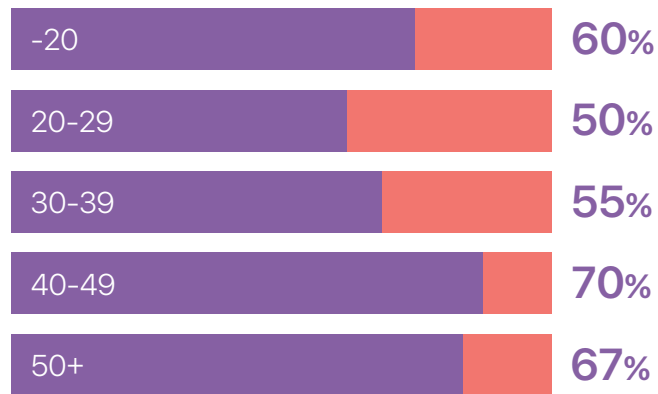
Monthly users (measured in millions)

2016
2017

	Siri	Cortana	Google	Alexa
2016	48.7	0.20	12.1	0.80
2017	41.4	0.70	26.6	2.20