IRIS Mobile Apps Survey

6/5/2017
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Executive Summary

A survey disseminated to the public during the Spring of 2017 provided information about what types of mobile apps the public is interested in and what features and functions they prefer.

Most survey respondent's access mobile apps on an Apple handheld device, but a significant number also use Androids. The most widely and often used types of apps are "Updates" (primarily weather updates) and "Social Media". Reliability was list as the most important factor in app retention, and ads, storage issues and battery life were listed as reasons to delete an app.

Respondents said they would be interested in an IRIS earthquake app that showed real-time earthquake information and live seismic data streams, and that had multiple map options and the ability to turn layers on and off. Respondents also indicated that would use an app with those features at least once a month.

Most of the respondents to the survey did not have a local instrument, but those who did said they would be likely to use an app that showed data from their seismometer.

Based on these results, IRIS should move forward with the design and implementation of a mobile app that focuses on showing recent earthquakes and a real-time seismic data feed.

Background

As mobile technology and Internet enabled devices continue to both decrease in cost and increase in widespread use, an increasing percentage of IRIS' audience base will utilize mobile devices on a daily basis. Information dissemination and educational product delivery via mobile apps will increase as a necessary tool for audience engagement.

Additionally, educational product delivery via mobile device (Android/iPhone and iPad/PC Tablet) is increasingly becoming the standard way to access educational information and scientific data. IRIS does not currently have any products that are designed specifically for mobile devices. The development of an IRIS mobile app will allow easy access to IRIS products at any time and in any location.

Goals
- *Increase the visibility and recognition of IRIS*
- *Present geophysics topics and near real time seismology data to general public/school/university audiences in an accessible manner*
- *Expand the use of IRIS educational resources in non-classroom settings*
- *Serve as a test use case for the development of potential future IRIS mobile app offerings.*

A search of the currently available seismology themed mobile apps reveals a wide variety of apps with similar features and visual appearance. There is not much value in IRIS offering an app that duplicates the look and function of an already available program. IRIS must offer something new and transformative. IRIS is currently

considering producing a mobile app that offers QCN (Quake Catcher Network) and other real-time seismic data. This would be a new and innovative earthquake information product that is not currently available.

In order to determine consumer interest in an IRIS Mobile App, IRIS EPO conducted a survey of users, which is discussed below.

Methods

We conducted a survey of potential mobile app users on Survey Monkey (www.surveymonkey.com) in order to determine if the community would be interested in an IRIS earthquake app, and if so, what features they would like to see. We also wanted to assess what factors were most important for potential consumers regarding mobile app use.

The survey was initially distributed via IRIS Social Media channels (Facebook and Twitter) on April 24, 2017 and then sent out twice more during May. On May 11th the survey was advertised via the IRIS listserv. On May 16th the survey was distributed to educators via the ESPIRIT listserv. The survey was closed on June 2, 2017 after 185 people responded.

The survey consisted of 17 questions and short answer responses. (Full survey available in Appendix)
1. *Do you use apps on your mobile phone or tablet?*
2. *What types of apps do you use?*
    a. *Social Media*
    b. *Games*
    c. *Sports*
    d. *Banking/Business*
    e. *Updates (weather, etc.)*
    f. *Music/Entertainment*
    g. *Educational*
    h. *Travel/Transportation*
    i. *Other*
3. *What types of apps do you use most often?*
4. *Rank the app features from 1-7 in order of importance*
    a. *Cost*
    b. *Speed*
    c. *Reliability*
    d. *Data Usage*
    e. *New Content*
    f. *Ease of Use*
    g. *Real-time Information*
5. *Why would you delete an app?*
    a. *I don't use it*
    b. *It's unreliable*
    c. *It takes too much bandwidth*
    d. *It uses too much storage*

       e. *It's no longer interesting*
       f. *Other*
6. *Do you use any science apps?*
7. *Do you have any apps that provide information about earthquakes?*
8. *If so, what earthquake apps do you use?*
9. *If IRIS were to create an app what features would you be most interested in?*
       a. *Recent earthquakes*
       b. *Faults*
       c. *Information about earthquake shaking*
       d. *Near real-time data from seismic instruments*
       e. *Real earthquake hazards information*
       f. *Seismic instrument location*
10. *What other features would you like to see?*
11. *What options would you like the app to have?*
       a. *Different map types*
       b. *Clickable layers with additional information*
       c. *Ability to turn layers on and off*
       d. *Basic educational information about earthquakes*
12. *What other features would you like the map to have?*
13. *How often would you use an app that had the features and options described above?*
       a. *Daily*
       b. *Weekly*
       c. *Monthly*
       d. *Rarely*
       e. *After an earthquake*
       f. *Other*
14. *Do you have a QCN sensor or other type of local instrument?*
15. *If so, would you use an app that showed data from your seismic instrument?*
16. *Would you be interested in being a tester for a new IRIS app?*
17. *If so, please provide you email address below so that we can contact you regarding app testing (your information will be kept private).*

Results

Almost all respondents used apps on their mobile devices, with most people using an iPhone (55%) or iPad (31%). However, a significant number of respondents also used an Android phone (36%) or tablet (12%).

The most widely used type of app is the Updates (weather, earthquakes, etc; 92%) followed by Social Media (78%), Travel / Transportation / Traffic (77%), Music / Entertainment (66%), Banking / Business (56%), Educational (53%), Games (39%), Sports (19%) and Other (18%). The "Other" field was very diverse with the most common answer being News. However, respondents reported using Social Media, Weather, News, Maps and Game apps most often.

When asked to rank the importance of different app features, respondents replied that

"Reliability" was most important to them, followed closely by "Real-time Information", "Ease of Use" and "Cost". "Speed", "New Content" and "Data Usage" were ranked lowest.

When asked what would cause them to delete an app respondents indicated that lack of use, unreliability, lack of interest in the app and storage issues would cause them to delete. In the "Other" section, they also noted that ads and battery consumption would cause them to delete an app.

70% of people said that they use science apps, and of those 59% said that they currently have an earthquake app. The most common earthquake apps listed were LastQuake, Quake Feed, MyShake and the USGS EQ Info.

When asked what features they would be most interested in seeing in an IRIS earthquake app people responded that they would be most interested in seeing recent earthquakes and near real-time data from seismic instruments. There was less interest in earthquake shaking information, fault locations, regional earthquake information and seismic instrument locations. Other responses included moment tensors, early warning, depth, tsunami information, back projections, and damage estimates. In terms of functionality, respondents were most interested in having maps with clickable layers and the ability to turn layers and off.

Respondents indicated that they would mostly likely use a map with the aforementioned functionality weekly (33%), daily (24%) or after an earthquake (21%).

Most of the survey respondents did not have a local instrument (78%). Of those who did, most would use an app that showed data from their instrument.


Recommendations

Based on the results of this survey it appears that there is significant interest in an IRIS earthquake app that shows recent earthquakes and a near real-time seismic data feed. It would be worthwhile to continue to pursue this new way of disseminating IRIS data.

(Appendix on following page)

Mobile App Survey

Q1 Do you use apps on your mobile phone or tablet?

Answered: 185   Skipped: 0
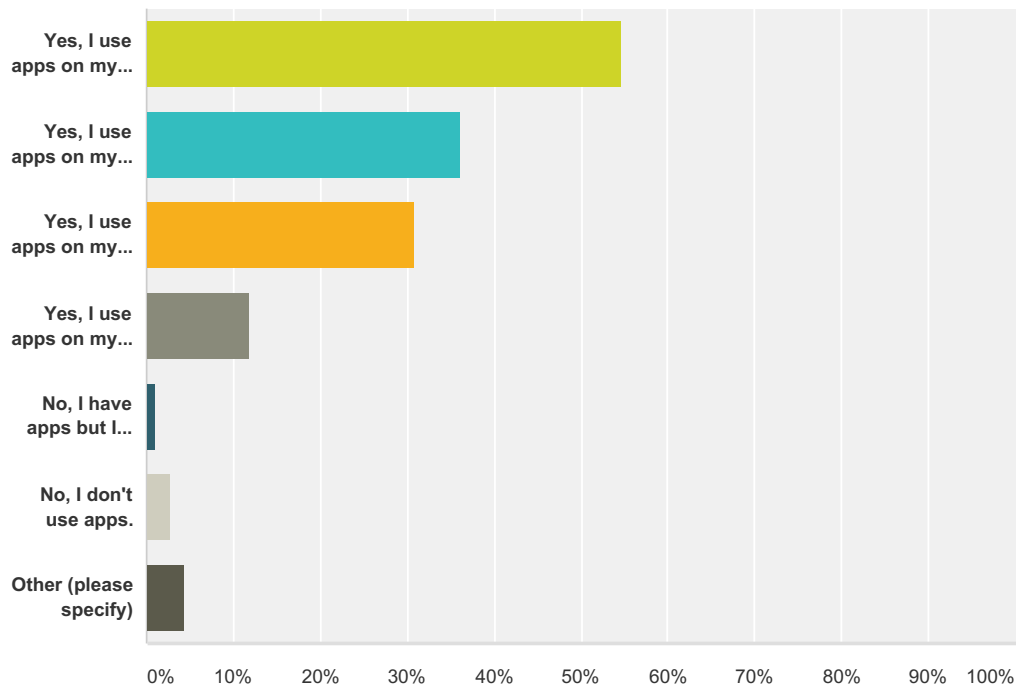
Answer Choices	Responses	
Yes, I use apps on my iPhone.	**54.59%**	101
Yes, I use apps on my Android.	**36.22%**	67
Yes, I use apps on my iPad.	**30.81%**	57
Yes, I use apps on my tablet.	**11.89%**	22
No, I have apps but I don't use them.	**1.08%**	2
No, I don't use apps.	**2.70%**	5
Other (please specify)	**4.32%**	8
Total Respondents: 185		

#	Other (please specify)	Date
1	I use BlackBerry for its security features and worldwide compatibility.	5/29/2017 4:39 AM
2	Yes, I use apps on my Blackberry	5/12/2017 6:13 AM
3	I use apps on my Windows devices	5/12/2017 5:02 AM
4	do web browser extensions (e.g. Google Chrome) count as apps?	5/11/2017 1:10 PM
5	I do not own a cell phone or tablet device.	5/11/2017 12:58 PM
6	i use apps on my windows phone	4/29/2017 1:30 PM
7	I have a blackberry. I'm sorry, I really am. Nothing runs on it. In the future I'll get an android phone and I highly suspect that I will use apps on that!	4/29/2017 1:15 PM

| 8 | BlackBerry 10 | 4/29/2017 10:49 AM |

Q2 What types of apps do you currently use? (Select all that apply)

Answered: 158   Skipped: 27
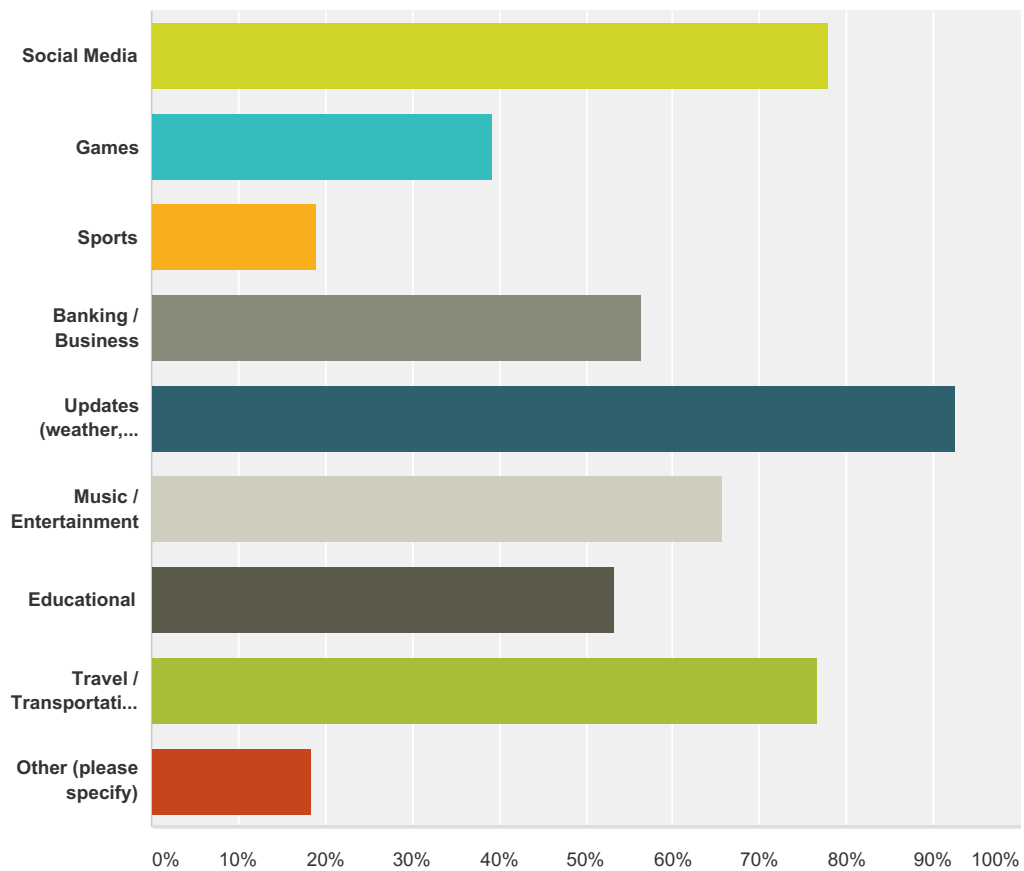
Answer Choices	Responses	
Social Media	**77.85%**	123
Games	**39.24%**	62
Sports	**18.99%**	30
Banking / Business	**56.33%**	89
Updates (weather, earthquakes, etc.)	**92.41%**	146
Music / Entertainment	**65.82%**	104
Educational	**53.16%**	84
Travel / Transportation / Traffic	**76.58%**	121
Other (please specify)	**18.35%**	29
Total Respondents: 158		

#	Other (please specify)	Date
1	Telemetry tests to field equipment	5/30/2017 5:52 PM

2	Citizen science	5/29/2017 11:59 AM
3	News	5/29/2017 9:11 AM
4	Latitude/Longitude navigator.	5/29/2017 4:44 AM
5	Reading	5/28/2017 8:22 PM
6	News (NYT, Wash Post, etc.)	5/28/2017 7:54 PM
7	Productivity, reading	5/23/2017 2:26 PM
8	Early Warning: SkyAlert	5/23/2017 1:57 PM
9	Shopping/Food Delivery	5/17/2017 11:12 AM
10	meal planning	5/16/2017 10:14 AM
11	To get factual information	5/16/2017 9:52 AM
12	Mapping and note taking	5/14/2017 4:54 AM
13	air quality, calendar management	5/13/2017 8:25 AM
14	Books on line I have a reading app.	5/12/2017 2:40 PM
15	Productivity	5/12/2017 5:04 AM
16	Newspaper subscription, Mail	5/12/2017 2:40 AM
17	News, Email	5/11/2017 3:35 PM
18	Shopping	5/11/2017 3:10 PM
19	News	5/11/2017 2:37 PM
20	vpn and secure shell to Linux servers. Also e-mail	5/11/2017 1:34 PM
21	Office/Productivity/Email, Web Browsing, Network Communications, Terminal/Shell, Calculators	5/11/2017 1:23 PM
22	apps for field data collection	5/11/2017 1:03 PM
23	none	5/11/2017 12:59 PM
24	Ted Talks, etc	5/11/2017 12:41 PM
25	social media facebook.	4/30/2017 12:03 AM
26	news, reference (ie calculator, dictionary, petrology), sometimes photo editing/annotating	4/29/2017 12:13 PM
27	motion and speed sensor tools	4/29/2017 10:54 AM
28	messaging, e-mail, browser, translating, camera…	4/27/2017 9:42 AM
29	Google docs	4/26/2017 4:17 PM

Q3 What types of apps do you use most often?

Answered: 136   Skipped: 49

#	Responses	Date
1	Facebook, NextDoor, maps, weather	6/1/2017 4:24 PM
2	email, text messaging, news, calendar, safari (for hardware tests), weather	5/30/2017 5:52 PM
3	Maps, games	5/30/2017 1:00 AM
4	Social media and informational (weather maps calendars etc)	5/29/2017 2:07 PM
5	social	5/29/2017 11:59 AM
6	Social (includes text messaging), news reader, music, maps	5/29/2017 11:59 AM
7	Social media	5/29/2017 10:04 AM
8	Educational	5/29/2017 9:11 AM
9	Messaging	5/29/2017 8:20 AM
10	The latitude/longitude locator, Flightaware and NOAA.	5/29/2017 4:44 AM
11	Facebook, NYTimes	5/29/2017 12:00 AM
12	Social media	5/28/2017 11:59 PM
13	Educational	5/28/2017 10:28 PM
14	Social Media	5/28/2017 9:37 PM
15	Games, updates, banking	5/28/2017 9:22 PM
16	Social media	5/28/2017 9:12 PM
17	Social	5/28/2017 9:05 PM
18	Alert apps, weather apps, social media	5/28/2017 8:41 PM
19	Facebook, Google earth, earthquake (your question # four will only let me rank two of the seven items)	5/28/2017 8:36 PM
20	Games	5/28/2017 8:22 PM
21	Email, Facebook, News, music	5/28/2017 7:54 PM
22	Traffic, earthquake, weather	5/28/2017 7:41 PM
23	weather, pandora, uber, calendar	5/26/2017 3:37 PM
24	Facebook, Google Maps, Wx, CNN	5/23/2017 5:46 PM
25	waze	5/23/2017 3:37 PM
26	Mail, weather, To-Do management, note-taking, reading	5/23/2017 2:26 PM
27	Social media	5/23/2017 2:07 PM
28	Twitter, Facebook, SkyAlert	5/23/2017 1:57 PM
29	Weather, camera/photo, e-mail, maps	5/17/2017 12:29 PM
30	all of the above except banking and travel	5/17/2017 11:12 AM
31	Updates, games	5/17/2017 10:28 AM
32	Social media, games, weather, sports	5/17/2017 7:40 AM
33	social media	5/16/2017 8:42 PM
34	facebook, quake watch, solitaire	5/16/2017 5:26 PM

35	Earthquakes, Science vocabulary, tsunami's, fitbit, games	5/16/2017 3:03 PM
36	News, science (e.g., GPS, weather, quake)	5/16/2017 2:14 PM
37	social media	5/16/2017 12:44 PM
38	Updates, music	5/16/2017 11:12 AM
39	updates, social media	5/16/2017 11:00 AM
40	weather, FB, mealime, shopping, news	5/16/2017 10:14 AM
41	Weather, and factual information	5/16/2017 9:52 AM
42	Game, Social Media	5/16/2017 9:48 AM
43	updates, travel	5/16/2017 9:01 AM
44	Social media, travel	5/16/2017 8:57 AM
45	Maps, podcasts, weather, educational.	5/16/2017 8:42 AM
46	Weather Travel Google	5/16/2017 8:41 AM
47	Personally, social media. But I would love some free apps to use in my classroom.	5/16/2017 8:34 AM
48	weather and travel apps	5/16/2017 8:31 AM
49	social, email/productivity (Sheets, etc.)	5/15/2017 12:17 PM
50	Ga nn es	5/15/2017 2:15 AM
51	social media, weather	5/14/2017 9:51 PM
52	weather updates, twitter	5/14/2017 1:58 PM
53	Social Media, Educational	5/14/2017 4:35 AM
54	email, link to realtime display of my school AS1, Facebook, weather	5/13/2017 6:51 PM
55	calendar management	5/13/2017 8:25 AM
56	My book app. I find it easier to catch up on my reading if the author has convert the text to an ebook.	5/12/2017 2:40 PM
57	Games, Sports, Podcast player	5/12/2017 2:39 PM
58	Business , social media, uodates	5/12/2017 12:29 PM
59	Email, web browser, weather, news	5/12/2017 12:05 PM
60	Maps, internet, water tracker, email, facebook, podcasts	5/12/2017 11:57 AM
61	updates, travel, social media	5/12/2017 8:55 AM
62	News reader, Music, pdfreader	5/12/2017 6:18 AM
63	social media, Internet browsing	5/12/2017 5:04 AM
64	Social media and sports	5/12/2017 4:16 AM
65	Information and news	5/12/2017 3:32 AM
66	The weather channel, whatsapp, googlemaps	5/12/2017 3:15 AM
67	News, Mail	5/12/2017 2:40 AM
68	traffic, social media, geohazard	5/12/2017 2:23 AM
69	BANKING/BUSINESS	5/11/2017 10:59 PM
70	Social media, weather, traffic, travel	5/11/2017 8:33 PM
71	weather, social media, music	5/11/2017 7:47 PM
72	web browser, messaging apps	5/11/2017 7:06 PM
73	Social media	5/11/2017 5:48 PM
74	Navigation apps (google maps, waze, etc.) Weather Eq notification (would be nice to have a user configurable notification app...min mag, region (probably predefined?, data source, etc)	5/11/2017 5:43 PM

| 75	Weather, Music, PodCasts	5/11/2017 4:52 PM
76	Social media	5/11/2017 4:49 PM
77	Updates and news	5/11/2017 4:40 PM
78	Communication (mail, IM, etc.), photography, fitness, list/organization, language learning.	5/11/2017 4:14 PM
79	Updates, Social Media, Banking	5/11/2017 4:03 PM
80	Uber, Trip planner, Banking, Email, IM (SMS), Weather	5/11/2017 3:35 PM
81	Social media But use browser even more	5/11/2017 3:34 PM
82	Banking	5/11/2017 3:16 PM
83	Any app that is useful.	5/11/2017 3:10 PM
84	Social media, news	5/11/2017 2:54 PM
85	News, weather, podcast	5/11/2017 2:37 PM
86	Banking	5/11/2017 1:59 PM
87	web browser, games, maps, metro	5/11/2017 1:47 PM
88	Communication	5/11/2017 1:44 PM
89	Music, Social Media	5/11/2017 1:43 PM
90	email, messaging, updates - earthquakes, weather, sports.	5/11/2017 1:34 PM
91	Fitbit	5/11/2017 1:32 PM
92	music, weather, social media	5/11/2017 1:31 PM
93	Social media, weather, news	5/11/2017 1:25 PM
94	News	5/11/2017 1:23 PM
95	Office/Productivity/Email, Web Browsing, Social Media, Travel, Entertainment, Weather	5/11/2017 1:23 PM
96	Mail, NYTimes, Facebook	5/11/2017 1:19 PM
97	Maps, audio, video.	5/11/2017 1:13 PM
98	transportation and messaging	5/11/2017 1:11 PM
99	social media, games and music education/productivity tools	5/11/2017 1:09 PM
100	Fitness	5/11/2017 1:09 PM
101	Games	5/11/2017 1:07 PM
102	games or news/updates	5/11/2017 1:05 PM
103	apps for field data collection	5/11/2017 1:03 PM
104	none	5/11/2017 12:59 PM
105	I would most certainly NOT use an IRIS app	5/11/2017 12:59 PM
106	Social Media Updates Music Transportation	5/11/2017 12:59 PM
107	Weather & mail	5/11/2017 12:58 PM
108	Social media, news	5/11/2017 12:54 PM
109	Myquake, facebook, Milenio, CNN, HuffingtonPost, WhatsApp, ...	5/11/2017 12:52 PM
110	Google Maps	5/11/2017 12:48 PM
111	Social Media	5/11/2017 12:46 PM
112	Communications (email, messengers), social media	5/11/2017 12:45 PM
113	social media	5/11/2017 12:43 PM
114	Social Media, Weather apps and Banking apps	5/11/2017 12:43 PM
115	Social Media	5/11/2017 12:42 PM

116	Social Media	5/11/2017 12:42 PM
117	Strava for sports, TedTalks for enlightenment, Weather, iTunes internet radio	5/11/2017 12:41 PM
118	news, travel	5/11/2017 12:40 PM
119	news	5/11/2017 12:40 PM
120	Social Media	5/11/2017 12:39 PM
121	Social media	4/30/2017 4:45 AM
122	USGS	4/30/2017 12:03 AM
123	social media	4/29/2017 12:13 PM
124	Social Media	4/29/2017 11:58 AM
125	Social media	4/29/2017 11:27 AM
126	News, tools	4/29/2017 10:54 AM
127	Facebook, earthquake, weather, news, solar,	4/29/2017 10:28 AM
128	travel(google map) and Social Media(Facebook)	4/29/2017 10:01 AM
129	Weather and disasters	4/29/2017 9:53 AM
130	Social	4/29/2017 8:57 AM
131	Early warning, forecast, whatsapp, Facebook	4/29/2017 8:51 AM
132	the "other" type	4/27/2017 9:42 AM
133	Emails first, internet, and weather.	4/27/2017 9:39 AM
134	Social	4/26/2017 11:50 PM
135	Twitter, earthquakes	4/26/2017 4:17 PM
136	Travel	4/26/2017 11:01 AM

## Q4 Rank the app features from 1 to 7 in order of importance (1 = most important; 7 = least important)

Answered: 153   Skipped: 32
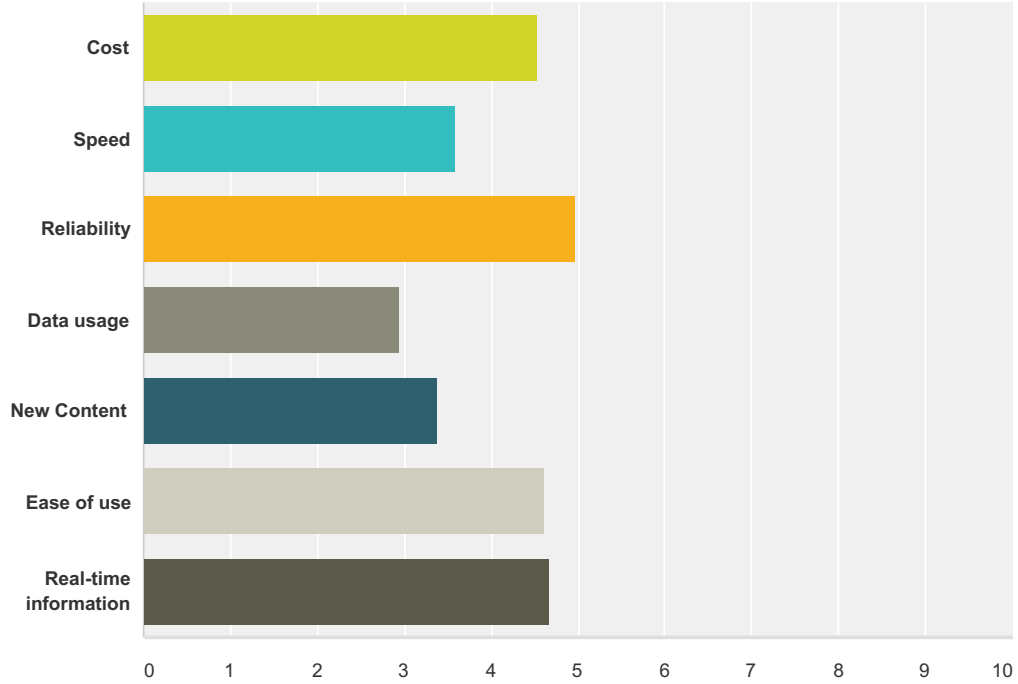
	1	2	3	4	5	6	7	Total	Score
Cost	**28.57%** 38	**14.29%** 19	**15.04%** 20	**6.02%** 8	**11.28%** 15	**10.53%** 14	**14.29%** 19	133	4.54
Speed	**2.36%** 3	**6.30%** 8	**19.69%** 25	**28.35%** 36	**17.32%** 22	**15.75%** 20	**10.24%** 13	127	3.60
Reliability	**24.81%** 32	**17.83%** 23	**17.83%** 23	**19.38%** 25	**12.40%** 16	**4.65%** 6	**3.10%** 4	129	4.97
Data usage	**2.19%** 3	**10.22%** 14	**9.49%** 13	**12.41%** 17	**20.44%** 28	**14.60%** 20	**30.66%** 42	137	2.95
New Content	**4.96%** 7	**15.60%** 22	**12.06%** 17	**8.51%** 12	**15.60%** 22	**25.53%** 36	**17.73%** 25	141	3.38
Ease of use	**18.57%** 26	**17.14%** 24	**20.71%** 29	**16.43%** 23	**9.29%** 13	**13.57%** 19	**4.29%** 6	140	4.61
Real-time information	**28.00%** 42	**22.00%** 33	**8.67%** 13	**8.00%** 12	**9.33%** 14	**11.33%** 17	**12.67%** 19	150	4.67

Q5 Why would you delete an app? (Choose all that apply)

Answered: 156   Skipped: 29
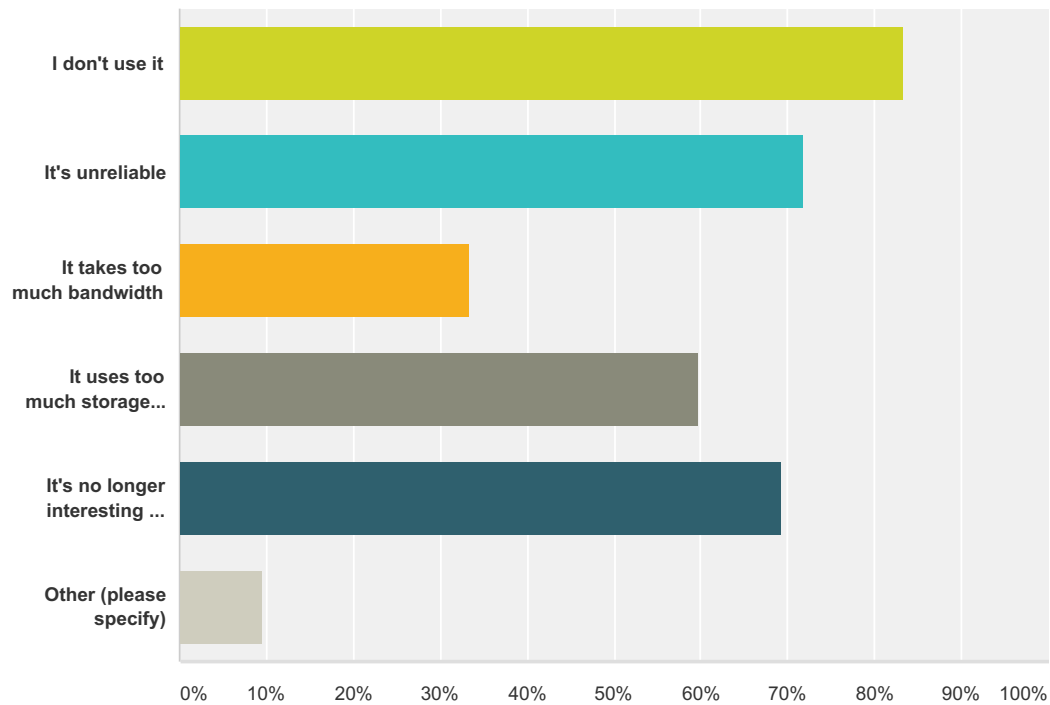
Answer Choices	Responses	
I don't use it	**83.33%**	130
It's unreliable	**71.79%**	112
It takes too much bandwidth	**33.33%**	52
It uses too much storage space	**59.62%**	93
It's no longer interesting to me	**69.23%**	108
Other (please specify)	**9.62%**	15
Total Respondents: 156		

| #	Other (please specify)	Date
1	It's not easy to use or it's too simple and boring	5/29/2017 9:11 AM
2	ads interfering with its operation.	5/29/2017 4:44 AM
3	Too many ads	5/28/2017 8:36 PM
4	Too many ads	5/28/2017 7:54 PM
5	it uses too much power	5/26/2017 3:37 PM
6	cumbersome	5/16/2017 8:31 AM
7	If it asks for too many permissions	5/12/2017 6:18 AM
8	Uses too bunch power by working in background	5/12/2017 3:32 AM

| 9	Battery consumption	5/11/2017 3:10 PM
10	runs the battery down, and/or won't stop running in the background	5/11/2017 2:37 PM
11	I find a better one that does same thing	5/11/2017 1:34 PM
12	battery use	5/11/2017 1:05 PM
13	I can't delete what I don't have	5/11/2017 12:59 PM
14	UI not well thought out (Take the AGU app for example of an app that is not as easy and intuitive as it should be).	5/11/2017 12:48 PM
15	It's not the best	4/26/2017 4:17 PM

Q6 Do you use any science apps?

Answered: 156   Skipped: 29
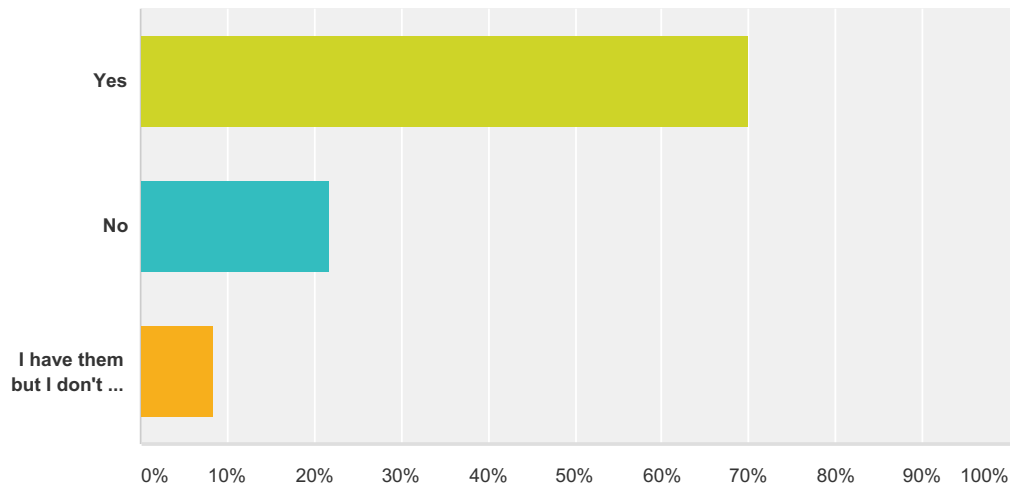
Answer Choices	Responses	
Yes	**69.87%**	109
No	**21.79%**	34
I have them but I don't use them	**8.33%**	13
Total		**156**

Q7 Do you have any apps that provide information about earthquakes?

Answered: 120   Skipped: 65
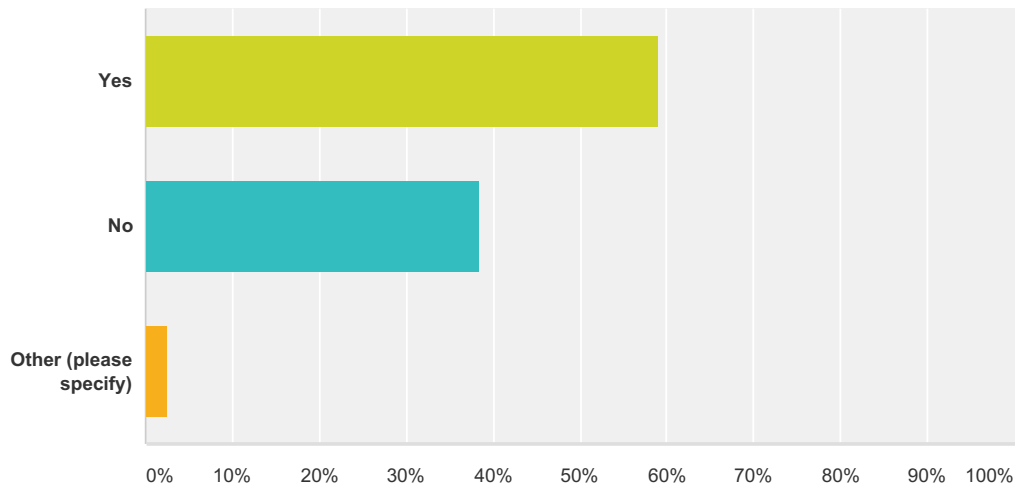
Answer Choices	Responses	
Yes	**59.17%**	71
No	**38.33%**	46
Other (please specify)	**2.50%**	3
Total		**120**

#	Other (please specify)	Date
1	I get Twitter push notifications from the NTWC but don't use any earthquake-specific apps	5/15/2017 12:30 PM
2	I used to but not anymore (not used often enough)	5/14/2017 9:54 PM
3	I used to, recently factory reset my phone.	4/29/2017 12:21 PM

## Q8 If so, what earthquake apps do you use?

Answered: 64   Skipped: 121

#	Responses	Date
1	Quake Watch, Temblor, iSeismometer, LastQuake, eQuake	5/30/2017 6:08 PM
2	quakefeed	5/29/2017 12:01 PM
3	Earthquake alert	5/29/2017 10:08 AM
4	Lastquake	5/29/2017 8:22 AM
5	Earthquake & volcanoes	5/28/2017 10:34 PM
6	CSEM EMSC, EQinfo	5/28/2017 9:39 PM
7	IEarthquakes lite, temblor	5/28/2017 8:00 PM
8	Earthquake Alert	5/28/2017 7:47 PM
9	epicentral, temblor	5/26/2017 3:40 PM
10	USGS Earthquake	5/23/2017 5:53 PM
11	LastQuake	5/23/2017 3:39 PM
12	GeoNet	5/23/2017 2:29 PM
13	SkyAlert	5/23/2017 1:58 PM
14	QuakeFeed, LastQuake	5/18/2017 11:33 AM
15	Earthquake Tsunami Pro, Red Cross Earthquakes, USGS Seismic, iSeismometer	5/17/2017 10:31 AM
16	quakefeed, I use it with my students. We love it	5/16/2017 8:43 PM
17	quake feed	5/16/2017 5:29 PM
18	Quakefeed	5/16/2017 3:05 PM
19	QuakeFeed	5/16/2017 2:16 PM
20	My Radar Google Earth	5/16/2017 8:45 AM
21	Just SeisMac	5/16/2017 8:33 AM
22	EQInfo Pacific ocean Tsunami Alerter	5/14/2017 11:41 PM
23	CSEM	5/14/2017 4:56 AM
24	link to realtime display of my schools AS1 through IRIS, NEIC website, iSeismometer	5/13/2017 6:57 PM
25	Taiwan CWB earthquake alert	5/13/2017 8:32 AM
26	MyShake, Earthquake (Red Cross App)	5/12/2017 2:42 PM
27	emsc app	5/12/2017 5:14 AM
28	Eqinfo Epicentral LastQuake Myshake	5/12/2017 3:37 AM
29	Earthquake Alert!	5/12/2017 3:18 AM
30	LastQuake, Earthquakes Tracker, AFAD Deprem (in Turkish), Deprem Bilgi Sistemi (in Turkish), Earthquake Alert!, EQInfo, GDACS, Pacific Ocean Tsunami Alert, MyShake, Geohazard (available from the developer only), GAR (Global Assessment Report)	5/12/2017 2:28 AM
31	Earthquake, AuScope	5/11/2017 8:35 PM
32	GeoNet	5/11/2017 7:08 PM
33	QuakeFeed - relatively reliable, I like the notification feature. USGSSeismic - doesn't work	5/11/2017 5:50 PM
34	Earthquake Network & Myshake	5/11/2017 5:16 PM

35	Temblor	5/11/2017 4:42 PM
36	quakes	5/11/2017 4:24 PM
37	CSEM-EMSC, QuakeFeed	5/11/2017 4:21 PM
38	Lastquake, Eqinfo, EarthquakesTracker	5/11/2017 4:07 PM
39	LastQuake MyShake	5/11/2017 3:38 PM
40	Quakewatch, Epicentral, Earthquake (Red Cross)	5/11/2017 1:46 PM
41	Epicentral, iSeismometer, LastQuake, Twitter	5/11/2017 1:32 PM
42	Quakefeed?	5/11/2017 1:23 PM
43	Last quake	5/11/2017 1:16 PM
44	emsc-csem lastQuake	5/11/2017 1:14 PM
45	My Quake	5/11/2017 1:07 PM
46	Quake catcher	5/11/2017 1:05 PM
47	LastQuake	5/11/2017 1:05 PM
48	Epicentral	5/11/2017 1:03 PM
49	seismo	5/11/2017 12:55 PM
50	Myquake, RESNOM	5/11/2017 12:54 PM
51	USGS	5/11/2017 12:48 PM
52	don't remember the name	5/11/2017 12:47 PM
53	Quakefeed, Chuck A. iPad app	5/11/2017 12:41 PM
54	USGS	4/30/2017 12:06 AM
55	MyShake by Berkley	4/29/2017 12:21 PM
56	I have the USGS daily earthquake page bookmarked on my home screen.	4/29/2017 12:01 PM
57	Earthquake and quake monitor	4/29/2017 10:37 AM
58	1.Central Weather Bureau Earthquake (Official App at Taiwan with Chinese version) 2. Synthetic Weather (Chinese version App	4/29/2017 10:09 AM
59	Lots of them, mainly quake feed	4/29/2017 9:56 AM
60	Earthquake alert	4/29/2017 9:02 AM
61	Twitter and LastQuake	4/27/2017 9:41 AM
62	Earthquake by Nico usgs emsc geonet	4/26/2017 11:53 PM
63	LastQuake Terremoto Earthquake	4/26/2017 4:44 PM
64	Myshake	4/26/2017 11:04 AM

Q9 If IRIS were to create an app what features would you be most interested in? (Rank from 1 to 6, with 1 = most interested and 6 = least interested)

Answered: 146   Skipped: 39
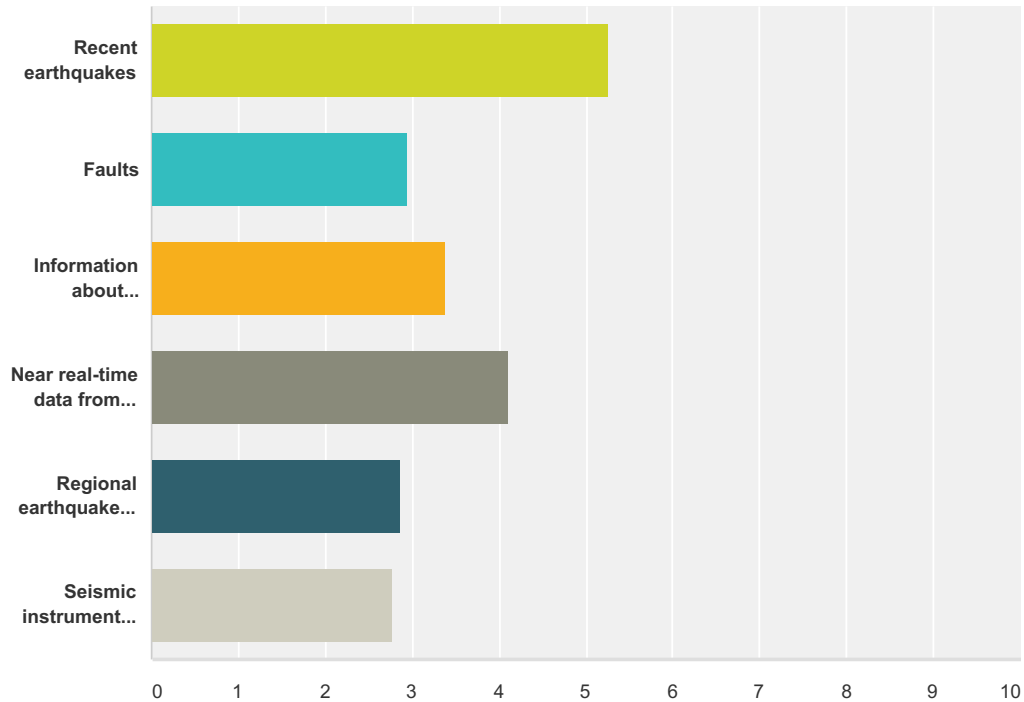
	1	2	3	4	5	6	Total	Score
Recent earthquakes	**62.50%** 85	**21.32%** 29	**6.62%** 9	**3.68%** 5	**1.47%** 2	**4.41%** 6	136	5.26
Faults	**3.79%** 5	**11.36%** 15	**21.97%** 29	**21.21%** 28	**21.97%** 29	**19.70%** 26	132	2.95
Information about earthquake shaking	**3.79%** 5	**20.45%** 27	**25.00%** 33	**22.73%** 30	**16.67%** 22	**11.36%** 15	132	3.38
Near real-time data from seismic instruments (seismic trace)	**24.64%** 34	**26.09%** 36	**18.12%** 25	**8.70%** 12	**12.32%** 17	**10.14%** 14	138	4.12
Regional earthquake hazards information	**4.44%** 6	**12.59%** 17	**17.04%** 23	**18.52%** 25	**25.93%** 35	**21.48%** 29	135	2.87
Seismic instrument locations	**5.71%** 8	**11.43%** 16	**12.14%** 17	**24.29%** 34	**17.86%** 25	**28.57%** 40	140	2.77

Mobile App Survey

Q10 What other features would you like to see?

Answered: 76   Skipped: 109

#	Responses	Date
1	Clickable station information.	5/30/2017 6:08 PM
2	seismic information about each country	5/29/2017 10:08 AM
3	Historic earthquake info, moment tensor solutions and moment magnitudes, clickable faults with technical and historic info, recurrence intervals, earthquake probabilities, special notice when earthquakes are volcanism related	5/29/2017 9:27 AM
4	Links for seismic history on near locations.	5/29/2017 4:51 AM
5	Where they study seismology	5/29/2017 12:01 AM
6	Volcanoes	5/28/2017 10:34 PM
7	Damages information, Image.	5/28/2017 9:39 PM
8	Early alert warning system is number ONE!	5/28/2017 8:44 PM
9	Early warning, obviously. Question eleven, all are important except three.	5/28/2017 8:43 PM
10	News	5/28/2017 8:23 PM
11	Early warning system	5/28/2017 8:00 PM
12	Maps, statistics	5/28/2017 7:47 PM
13	Earthquake reporting using phone sensors; manual reporting	5/23/2017 2:29 PM
14	Big earthquake alerts	5/23/2017 2:14 PM
15	Back projection movies, moment tensors,	5/18/2017 11:33 AM
16	Like the EQB filters: Depth, magnitude, date, location...	5/17/2017 12:33 PM
17	earthquake monitoring- a seismometer feature in the app for classroom or citizen science use	5/17/2017 11:15 AM
18	Demos and models that can be utilized on the big screen to show students how real-time EQ tracking works.	5/17/2017 7:41 AM
19	plate tectonic names, movements of those plates, plate boundaries labelled	5/16/2017 8:43 PM
20	Different clickable layers	5/16/2017 6:15 PM
21	Ease of use	5/16/2017 5:29 PM
22	tsunami information	5/16/2017 3:05 PM
23	Map displaying possible epicenters from the real time data	5/16/2017 11:03 AM
24	Information on how p and s waves move. Shadow Zone information	5/16/2017 9:50 AM
25	alert when an earthquake is in my area, and then a link to USGS "did you feel it"	5/16/2017 9:03 AM
26	A layer for past earthquakes, for example a layer that shows earthquakes in the past 1 year, 5 years, 10 years, etc.	5/16/2017 8:47 AM
27	I'd want it to include a map that is easy to manipulate.	5/16/2017 8:33 AM
28	links to other sources of information, tectonic background of area. is there a way to integrate EEW too or is access to that still restricted to set of beta users?	5/15/2017 12:30 PM
29	wave propagation simulation, cross section of Earth interior	5/14/2017 9:54 PM
30	IEB functionality like being able to change how much are is shown (i.e., OK vs Midwest US vs all of US), color coded by magnitude and depth	5/13/2017 6:57 PM
31	focal mechanism, aftershock distribution, background seismicity	5/13/2017 8:32 AM
32	red cross response to a location (just throwing it out there).	5/12/2017 2:50 PM
33	What to do before/during/after an earthquake. EQ news.	5/12/2017 2:42 PM

| 34	Information on current science that is supported by IRIS	5/12/2017 11:58 AM
35	Moment tensor/Mechanism direct access to data producs	5/12/2017 5:14 AM
36	Links to did you feel it apps to allow users to share their own experiences	5/12/2017 3:37 AM
37	None, I probably would not use it but simply go to the IRIS pages on my laptop, I only use my iPad occasionally.	5/12/2017 2:43 AM
38	estimates for population affected, nearby critical infrastructures, weather conditions	5/12/2017 2:28 AM
39	Historical earthquakes	5/11/2017 8:35 PM
40	Earthquake warnings? (i.e. a large earthquake occurs in LA and I am in San Francisco. The message could get to me quicker than the seismic waves travel)	5/11/2017 5:16 PM
41	Not sure.	5/11/2017 4:42 PM
42	Focal Mechanisms, intensity, moment tensor, historical earthquakes	5/11/2017 4:24 PM
43	Unclear to me what is meant by some of the descriptions above, e.g., "faults"or "information about shaking", so I'm unclear which categories are not already available via USGS. It would be useful to place recent earthquakes nicely into context (faults, geology, hazard, population, infrastructure, etc). There are already many apps that just list the earthquakes and link to USGS or EMSC web information.	5/11/2017 4:21 PM
44	Did you feel it? Multiple Languages! Read The latest event information	5/11/2017 4:07 PM
45	See http://alomax.free.fr/webtools/resources/info.html	5/11/2017 3:38 PM
46	With the option to deliver data to my laptop.	5/11/2017 2:58 PM
47	Derivative data products	5/11/2017 1:51 PM
48	Your questions that seem to want a rating of a number of items are only allowing answer to one question. Recent earthquakes, level of shaking, seismic trace	5/11/2017 1:49 PM
49	Earthy Warning - hail, tornado, earthquake, tsunami.	5/11/2017 1:49 PM
50	news videos	5/11/2017 1:38 PM
51	For seismopeeps: An app front end to webservices. For general audience: Links to IRIS online teaching materials.	5/11/2017 1:32 PM
52	Other scientific information like climate, noise levels, environment.	5/11/2017 1:23 PM
53	links to news stories for damage reports	5/11/2017 1:11 PM
54	maps of seismic velocities for any given location; real-time GPS data	5/11/2017 1:05 PM
55	Tools for use by scientists and PIs in the field. Data viewer, metadata generator, station metadata viewer based on GPS location, site logging tool.	5/11/2017 1:05 PM
56	NO SEISMIC INSTRUMENT LOCATIONS PLEASE!! That could easily lead to increased visitation and/or vandalism.	5/11/2017 1:03 PM
57	non of the above; IRIS should provide decent tools for laptop/desktop computers; NEIC went the wrong way to redesign their "recent earthquakes" page to make it mobile app-friendly; what a huge step backward!!	5/11/2017 1:01 PM
58	cascadia subduction quake early warning!	5/11/2017 1:00 PM
59	earthquake prediction ;-)	5/11/2017 12:55 PM
60	Built-in terminology definitions and examples. Interface to remotely download to a designated device (instruct data to be downloaded to a remote machine from your phone). DO NOT AUTOMATICALLY SIGN UP FOR MAILING LISTS. Ability to interface with google earth/maps on the phone.	5/11/2017 12:52 PM
61	Integration (e.g., save events/data searches to an account)	5/11/2017 12:49 PM
62	Estimates - # people affected; infrastructure affected	5/11/2017 12:48 PM
63	Conferences or jobs in seismology community.	5/11/2017 12:46 PM
64	volcano information	5/11/2017 12:43 PM
65	Ability to view existing tectonic geologic info and tie it to recent earthquakes Active volcanoes	5/11/2017 12:43 PM
66	Options on what and how to display events and other data. Too many EQ apps are either too complicated or too basic.	5/11/2017 12:41 PM
67	All the above!	4/30/2017 12:06 AM

68	MyShake has a crowd source seismograph feature that I thought was really cool. If you could somehow incorporate something similar that would be neat. Also if there is a real-time earthquake tracker, having small, <1.0, earthquakes would be nice. I understand that might be a lot of data though.	4/29/2017 12:21 PM
69	Tsunami information	4/29/2017 12:01 PM
70	Seismic risk	4/29/2017 11:30 AM
71	Earthquake range of effectiveness, depth and p-wave ,S wave	4/29/2017 10:37 AM
72	Depth	4/29/2017 9:56 AM
73	SMS	4/29/2017 9:14 AM
74	Macroseismic did you feel it information	4/29/2017 9:02 AM
75	The features I didn't check above are important but already easily accessible through USGS web. It would be great to have a tool (web or app) to visualize earthquake sequences like swarms, foreshocks and aftershocks, including the following features: 3D hypocenters plot with rotation capability, gridded moment density and earthquake density plots, location vs time plots, M vs time stemplots, eq number vs time plot (Omori check plot), M histogram (gutenberg richter check plot) (I started talking with Anthony Lomax about this yesterday) Pablo Ampuero	4/26/2017 4:44 PM
76	Moment Tensor and Regional information (poster)	4/26/2017 11:04 AM

Q11 What options would you like the app to have?

Answered: 145   Skipped: 40
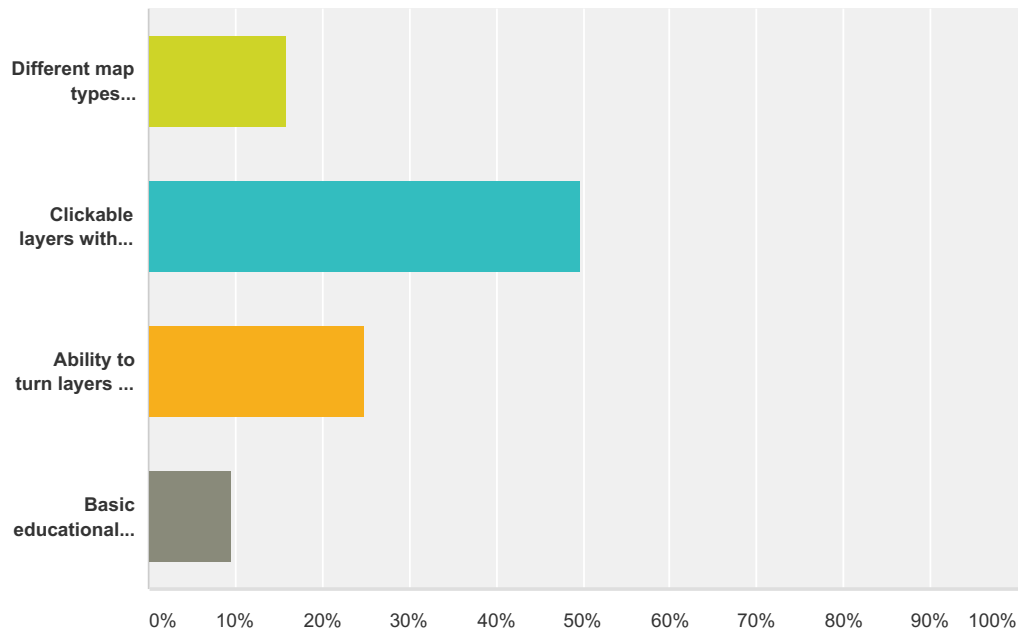
Answer Choices		Responses	
Different map types (Satellite, street map, etc)		**15.86%**	23
Clickable layers with additional information (earthquakes, faults)		**49.66%**	72
Ability to turn layers on and off		**24.83%**	36
Basic educational information on earthquakes and seismology		**9.66%**	14
Total			**145**

Q12 What other features would you like the app to have?

Answered: 56   Skipped: 129
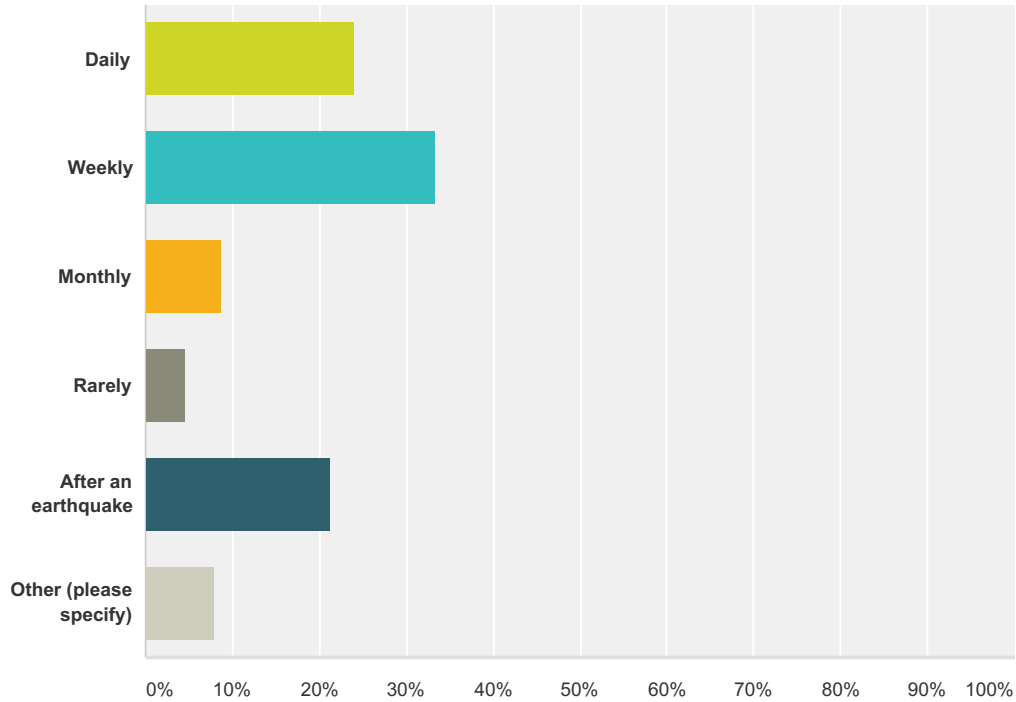
#	Responses	Date
1	Different map types, ability to switch layers on and off	5/29/2017 12:01 PM
2	Ability to place pins on interesting faults/earthquakes or "favorites" for the user to keep track of, availability in foreign language versions, tie in to the tsunami and early warning systems	5/29/2017 9:27 AM
3	At least to make it compatible with blackberry, it is frustrating that most apps are designed to use on toys and not tools.	5/29/2017 4:51 AM
4	Instruments	5/29/2017 12:01 AM
5	3D viewing of fault inside the earth and earthquake as well .	5/28/2017 10:34 PM
6	Tsunami warning	5/28/2017 9:27 PM
7	User friendly, regional earthquake news and links to earthquake related orgs	5/28/2017 8:44 PM
8	Google earth type navigation with all the layers you spoke of.	5/28/2017 8:43 PM
9	Notifocations	5/28/2017 8:23 PM
10	All 4 buttons above (I can only select one)	5/28/2017 8:00 PM
11	Push notifications to my phone	5/23/2017 4:17 PM
12	More information about earthquake	5/23/2017 2:14 PM
13	Station data availability	5/18/2017 11:33 AM
14	I was only able to select one from the list, I would have liked to be able to select Different Map types as well.	5/17/2017 12:33 PM
15	additional information about quakes and faults	5/16/2017 6:15 PM
16	All of the above (#11 we can only select one)	5/16/2017 2:16 PM
17	Clickable layers with additional info	5/16/2017 11:03 AM
18	Look up past earthquakes	5/16/2017 9:50 AM
19	Ability to share/download maps (.pdf?) of current screens instead of just grabbing a screenshot.	5/16/2017 8:47 AM
20	Different map types	5/16/2017 8:45 AM
21	I wanted to click everything in number 11, but was not able to do so. Did you mean to only have one option for #11?	5/16/2017 8:33 AM
22	Ability to show seismogram from my AS1, and to extract an event from data display	5/13/2017 6:57 PM
23	there are two reasons for me to use this app. One for my own information, whether I was in the earthquake area or not. Two-as a high school teacher fighting with cell phones I would use the app, and ask the students to have it, to teach earthquakes. It would be a resource for them.	5/12/2017 2:50 PM
24	(If it were available, I would have selected "all of the above" for #11)	5/12/2017 2:42 PM
25	All of the above	5/12/2017 11:22 AM
26	Ability to view and interact with realtime and archived seismicdata (as epicentral plus does already but available on android and also with more analysis features)	5/12/2017 3:37 AM
27	None	5/12/2017 2:43 AM
28	A layer with the station locations	5/11/2017 8:35 PM
29	make your own 'earthquake' - turn your phone into a seismometer. earthquake early warnings.	5/11/2017 7:53 PM
30	Notification	5/11/2017 5:50 PM
31	Why can I only select one of the four categories in question 11?? I would like the first three of those. (The second and third seem redundant.)	5/11/2017 4:21 PM

32	Moment tensors	5/11/2017 3:13 PM
33	Have the latest bathymetry and faults in the ocean as well.	5/11/2017 2:58 PM
34	Question 11 only allows a single option, my answer is all of them.	5/11/2017 1:51 PM
35	Background information associated with the zone in which earthquake occurred	5/11/2017 1:49 PM
36	Early warning is only application that I care.	5/11/2017 1:49 PM
37	I'd like all of the above first 3, but it won't let me choose them all!	5/11/2017 1:46 PM
38	Just to reiterate: Seismic traces are the most important to me as a seismologist. An app version of wilber 3 would be useful for browsing seismology. But I envision the broadest impact would be in developing an app that utilizes IRIS teaching/outreach materials.	5/11/2017 1:32 PM
39	recent seismicity	5/11/2017 1:14 PM
40	For question 11 - all of the top three options are important	5/11/2017 1:05 PM
41	Links to nationally important resources (NEIC, regional earthquake centers, tsunami warning centers.) Alerts based on user criteria. Real-time epicenter determination estimate, mag estimate.	5/11/2017 1:05 PM
42	none of the above! provide better desktop computer tools!	5/11/2017 1:01 PM
43	question 11 above is mutually exclusive (can't select all)	5/11/2017 12:55 PM
44	Notifications of major earthquakes after they have been detected and preliminary results.	5/11/2017 12:52 PM
45	View IRIS data holdings	5/11/2017 12:49 PM
46	Different map types and the ability to turn layers off and on (there was a bug in question 9 that didn't let you choose more than one option)	5/11/2017 12:44 PM
47	All of the above from Q11	5/11/2017 12:41 PM
48	All the above-mentioned of question 11.	4/30/2017 12:06 AM
49	I actually liked all of the options in number 11. So those. Some nerdy feature requests: depth of earthquake, wave speeds, maybe other technical details.	4/29/2017 12:21 PM
50	Depth maps	4/29/2017 12:01 PM
51	Amplification	4/29/2017 11:30 AM
52	Zoomable map would be nice near real-time updates after a large quake	4/29/2017 10:37 AM
53	Nothing else	4/29/2017 9:14 AM
54	Link to scientific publications concerning the area where the earthquake occurred	4/29/2017 9:02 AM
55	Gps coordinares to copy	4/26/2017 11:53 PM
56	(Could not check all that apply above: 2 and 3) See 10	4/26/2017 4:44 PM

Q13 How often would you use an app that had the features and options described above?

Answered: 150   Skipped: 35

Answer Choices	Responses	
Daily	**24.00%**	36
Weekly	**33.33%**	50
Monthly	**8.67%**	13
Rarely	**4.67%**	7
After an earthquake	**21.33%**	32
Other (please specify)	**8.00%**	12
Total		**150**

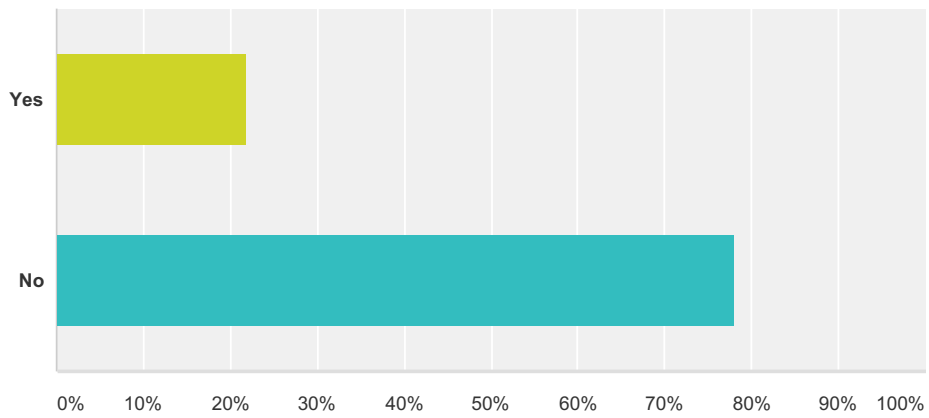| #	Other (please specify)	Date
1	During a unit on Volcanoes/Earthquakes or for a Scientific Investigation	5/17/2017 11:15 AM
2	When I teach this	5/16/2017 8:43 PM
3	Daily with notifications; otherwise probably weekly	5/16/2017 2:16 PM
4	After an earthquake and while on this topic in class	5/16/2017 11:03 AM
5	Rarely, except when I teach earthquakes in my class, during which time I would use the app everyday.	5/16/2017 8:59 AM
6	hourly?	5/13/2017 6:57 PM
7	AFter an earthquake. If it had a notification feature I would like that to give immediate notification of large earthquakes.	5/11/2017 5:50 PM

8	I like to see alert and do not care much about after an earthquake dicussion.	5/11/2017 1:49 PM
9	Both after an earthquake, AND potentially weekly	5/11/2017 1:46 PM
10	probably never	5/11/2017 12:55 PM
11	Can't predict since it does not exist!	5/11/2017 12:45 PM
12	Whenever I am teaching plate tectonics	4/30/2017 4:46 AM

8	I like to see alert and do not care much about after an earthquake dicussion.	5/11/2017 1:49 PM

Q14 Do you have a QCN sensor or other type of local instrument?

Answered: 151   Skipped: 34

Answer Choices	Responses	
Yes	**21.85%**	33
No	**78.15%**	118
Total		**151**

Q15 If so, would you use an app that showed data from your seismic instrument?

Answered: 136   Skipped: 49
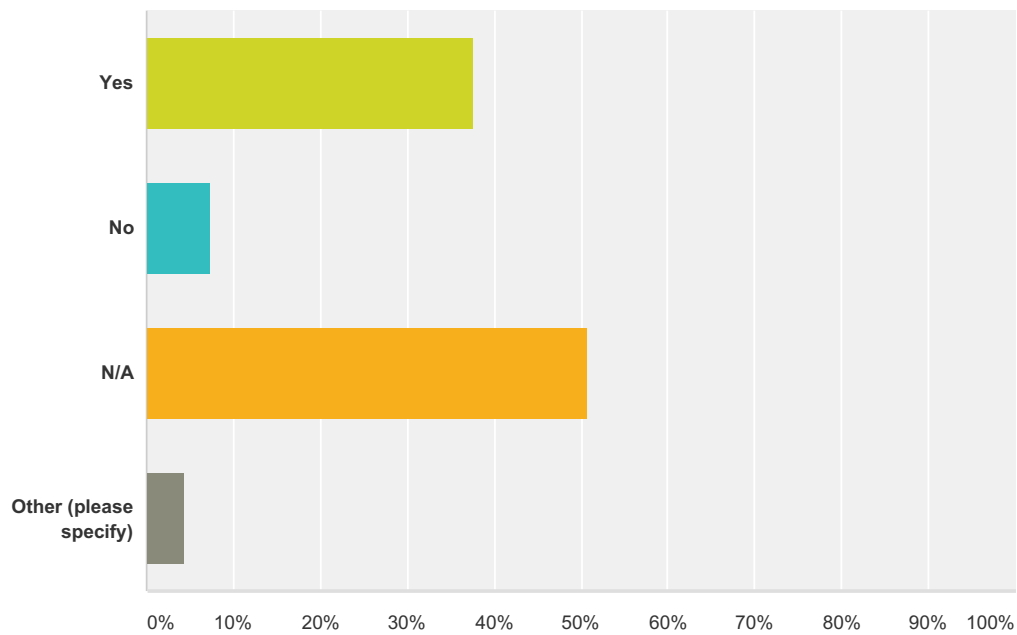
Answer Choices	Responses	
Yes	37.50%	51
No	7.35%	10
N/A	50.74%	69
Other (please specify)	4.41%	6
Total		**136**

#	Other (please specify)	Date
1	I would if I had one	5/29/2017 12:01 PM
2	https://appsto.re/mx/O9bkU.i	5/23/2017 1:58 PM
3	We've designed a web-based interface to show the QCN waveform rather than on an app	5/13/2017 8:32 AM
4	Yes, but not for this alone	5/11/2017 1:49 PM
5	if I ever hooked it up	5/11/2017 12:55 PM
6	Yes and shake maps using other community sensors and conventional seismometers nearby	4/26/2017 4:44 PM

Q16 Would you be interested in being a tester for a new IRIS app?

Answered: 33   Skipped: 152
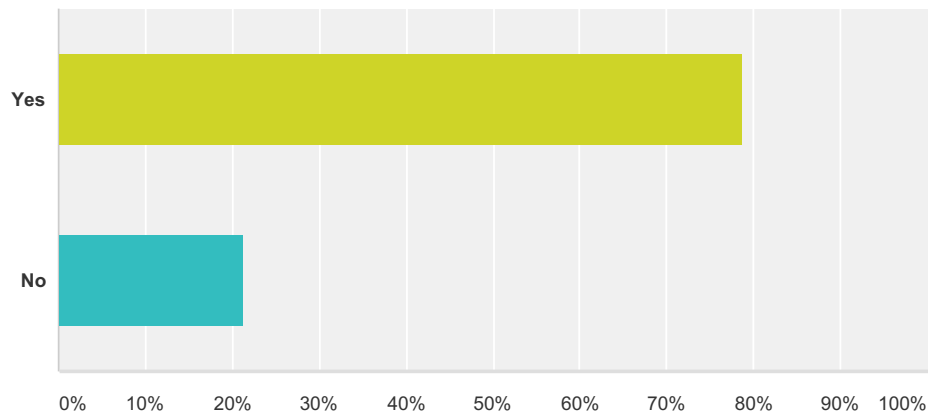
Answer Choices	Responses	
Yes	**78.79%**	26
No	**21.21%**	7
Total		**33**