

100

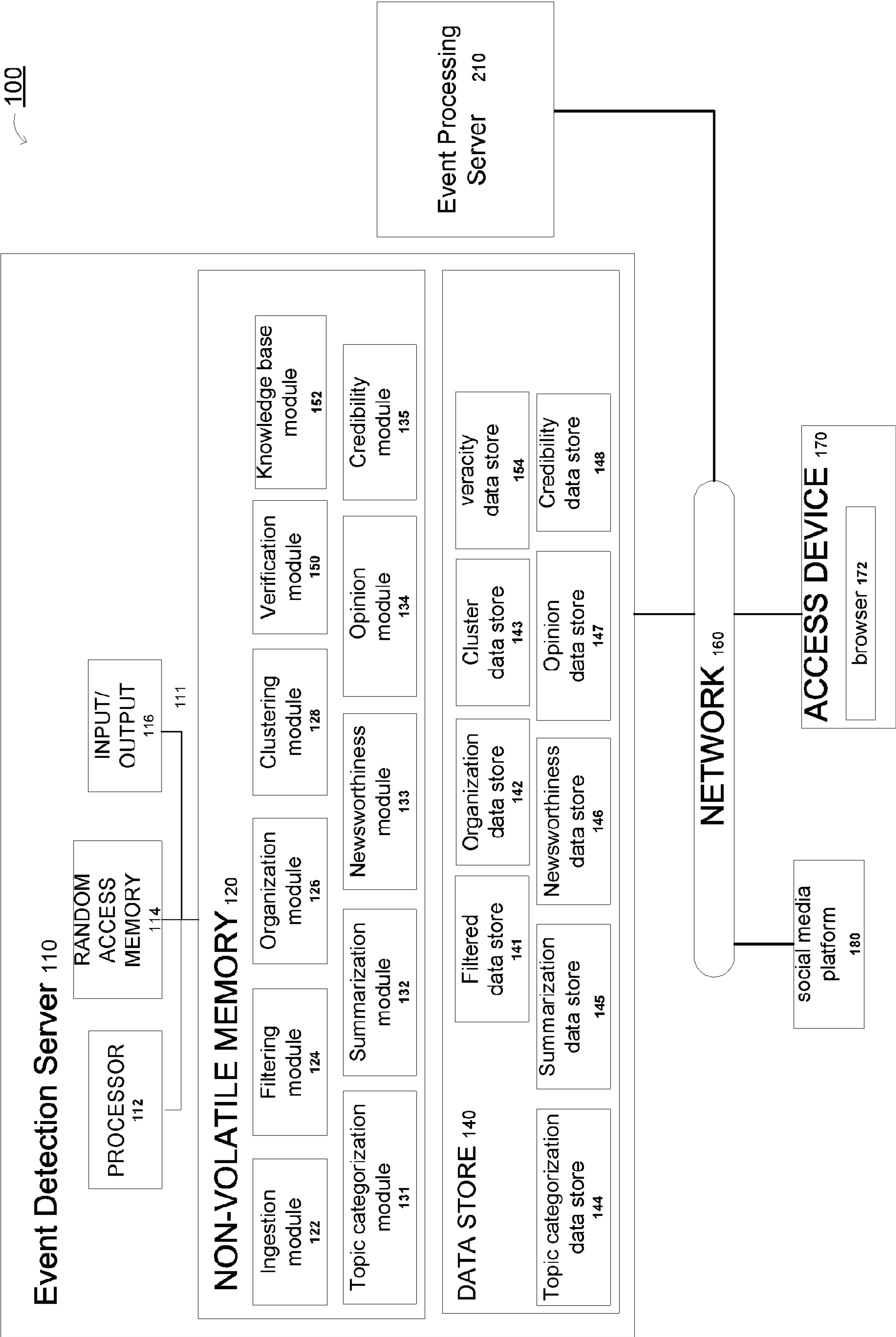


FIG. 1

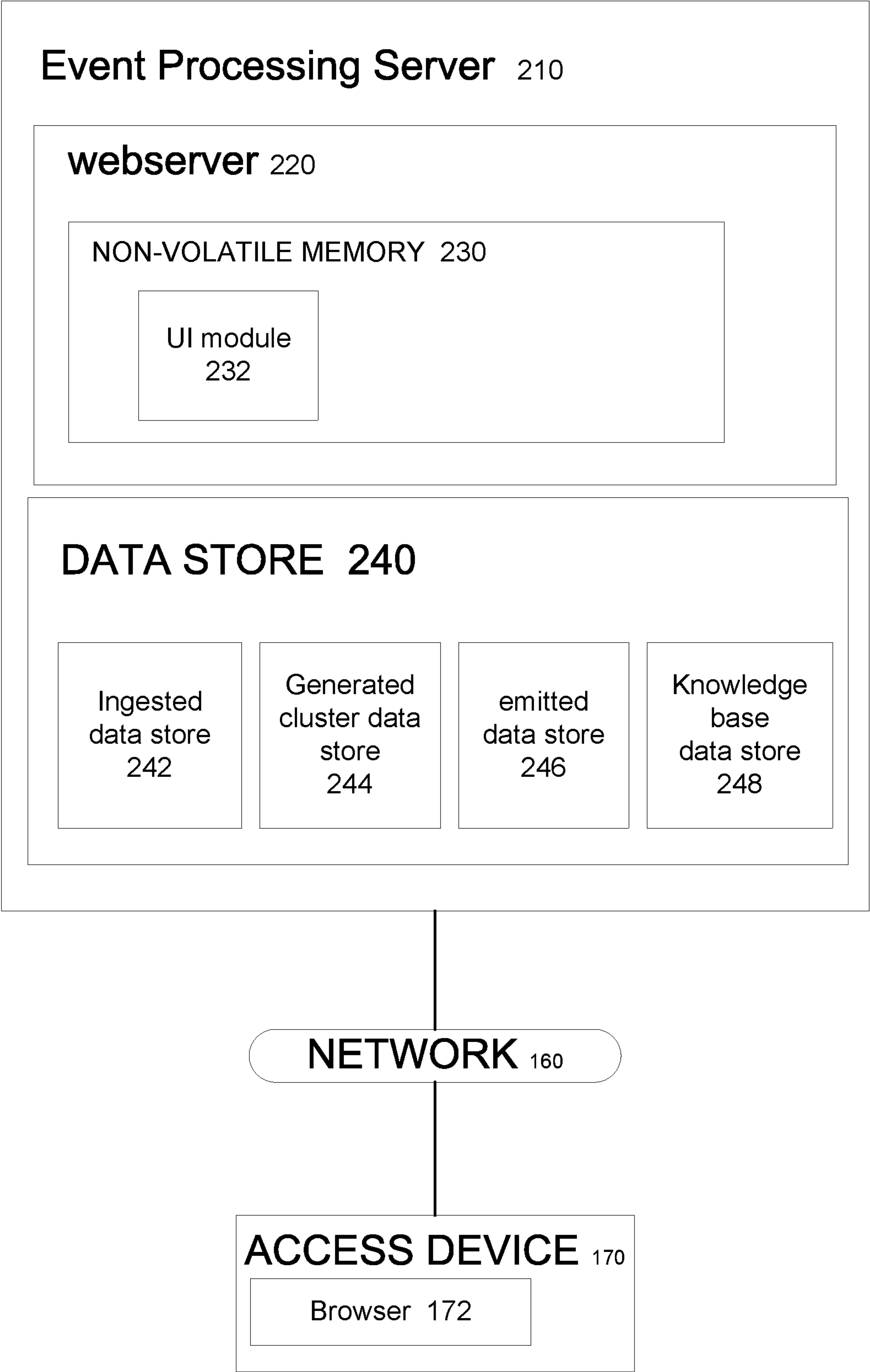
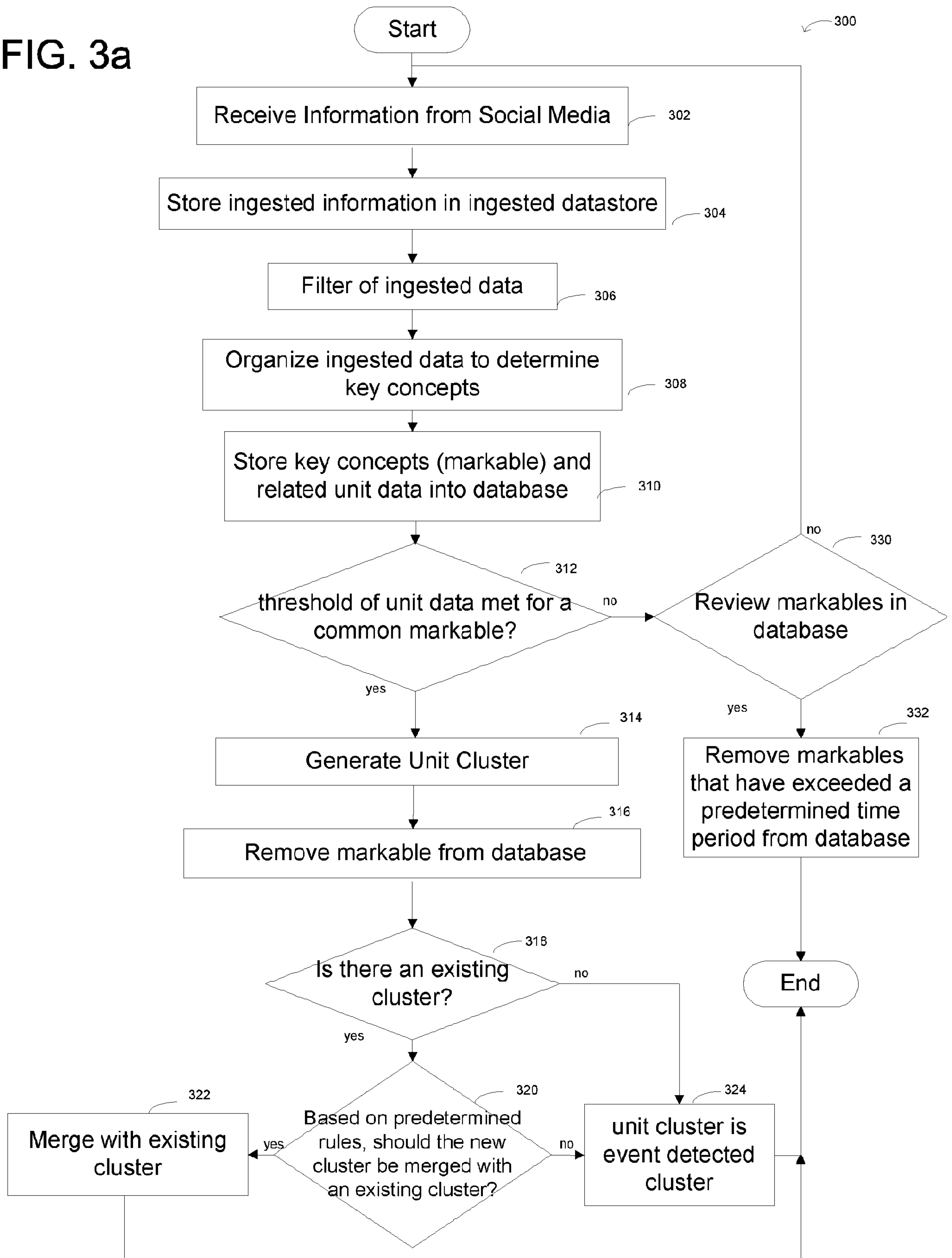


FIG. 2

FIG. 3a



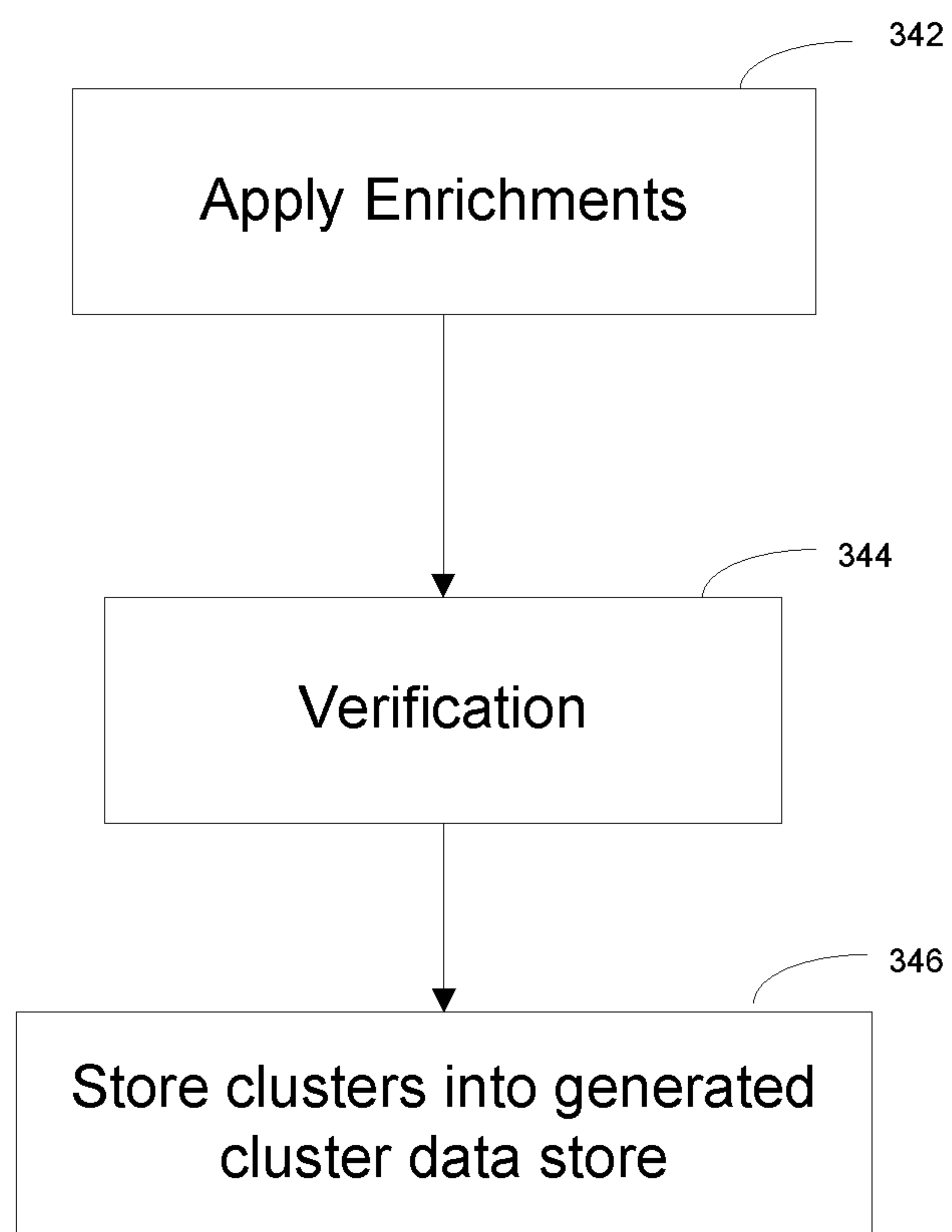
**FIG. 3b**

Table 1: Description of Features

Category	Feature Name	Feature Type	Feature Description
402a	HAS NAME	boolean	If the author has name
	HAS DESCRIPTION	Boolean	If the author has description
	USER HAS URL	Boolean	If the author has URL
	HAS LOCATION	Boolean	If the author has location
	MATCHES CLUSTER LOCATION	Boolean	If the author location matches event location
	IS WITNESS	Boolean	If the author is the witness of the event
	IS PROTECTED	Boolean	If the author is protected
	IS VERIFIED	Boolean	If the author is verified
402b	HAS MULTIMEDIA	Boolean	If the tweet contains multimedia
	HAS ELONGATED WORD	Boolean	If the tweet has elongated word
	TWEET HAS URL	Boolean	If the tweet has url
	HAS NEWS URL	Boolean	If the tweet has url from news organization
	NUMBER SENTIMENT POSITIVE WORDS	NUMERICAL	number of positive sentiment word
	NUMBER SENTIMENT NEGATIVE WORDS	NUMERICAL	number of negative sentiment word
	SENTIMENT SCORE	NUMERICAL	the sentiment score of the tweet
	EVENT TOPIC	CATEGORICAL	The topic of the event
402c	MOST RETWEET CNT	NUMERICAL	the count of the most retweeted tweets
	RETWEET SUM	NUMERICAL	the sum of number of retweeted tweets
	HASHTAG SUM	NUMERICAL	the sum of number of hastags
	NEGATION FRACTION	NUMERICAL	the fraction of tweets that deny the event
	SUPPORT FRACTION	NUMERICAL	the fraction of tweets that believe the event
	QUESTION FRACTION	NUMERICAL	the fraction of tweets that question the event

FIG. 4a

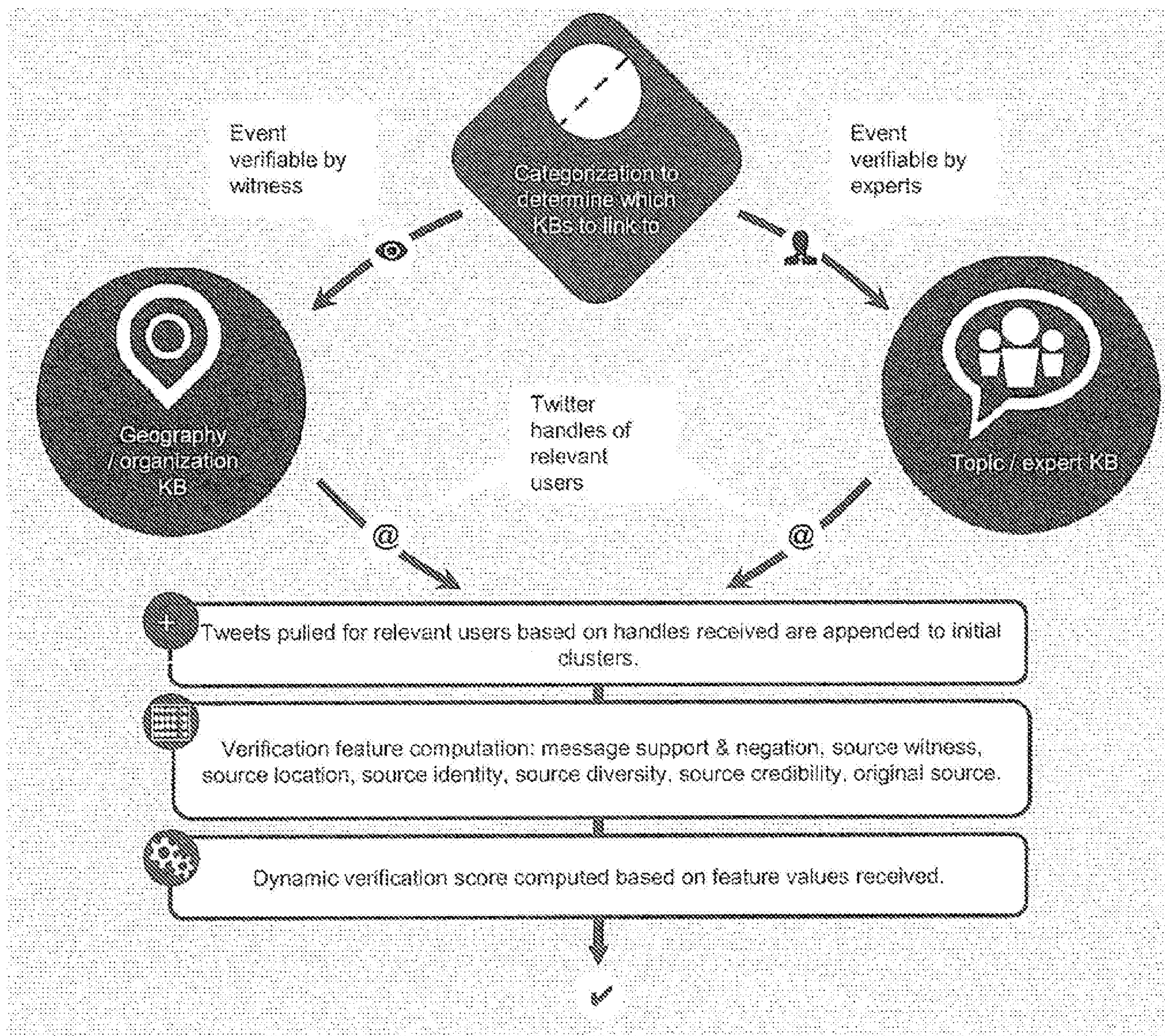


FIG. 4b

502a
Confederate flag supporters rally at Linn Park
502b
in Birmingham #ConfederateFlag
502c
sp.lc/PNYbZ
502d

FIG. 5a

504	506	500
markable α	Unit data 1 ... unit data n	
...	...	
markable n	Unit data 1 ... unit data n	

FIG. 5b

504	506	500
508a	Confederate flag	Unit data 1
508b	Rally	Unit data 1
508c	Linn Park	Unit data 1
508d	Birmingham	Unit data 1

FIG. 5c

Unit cluster

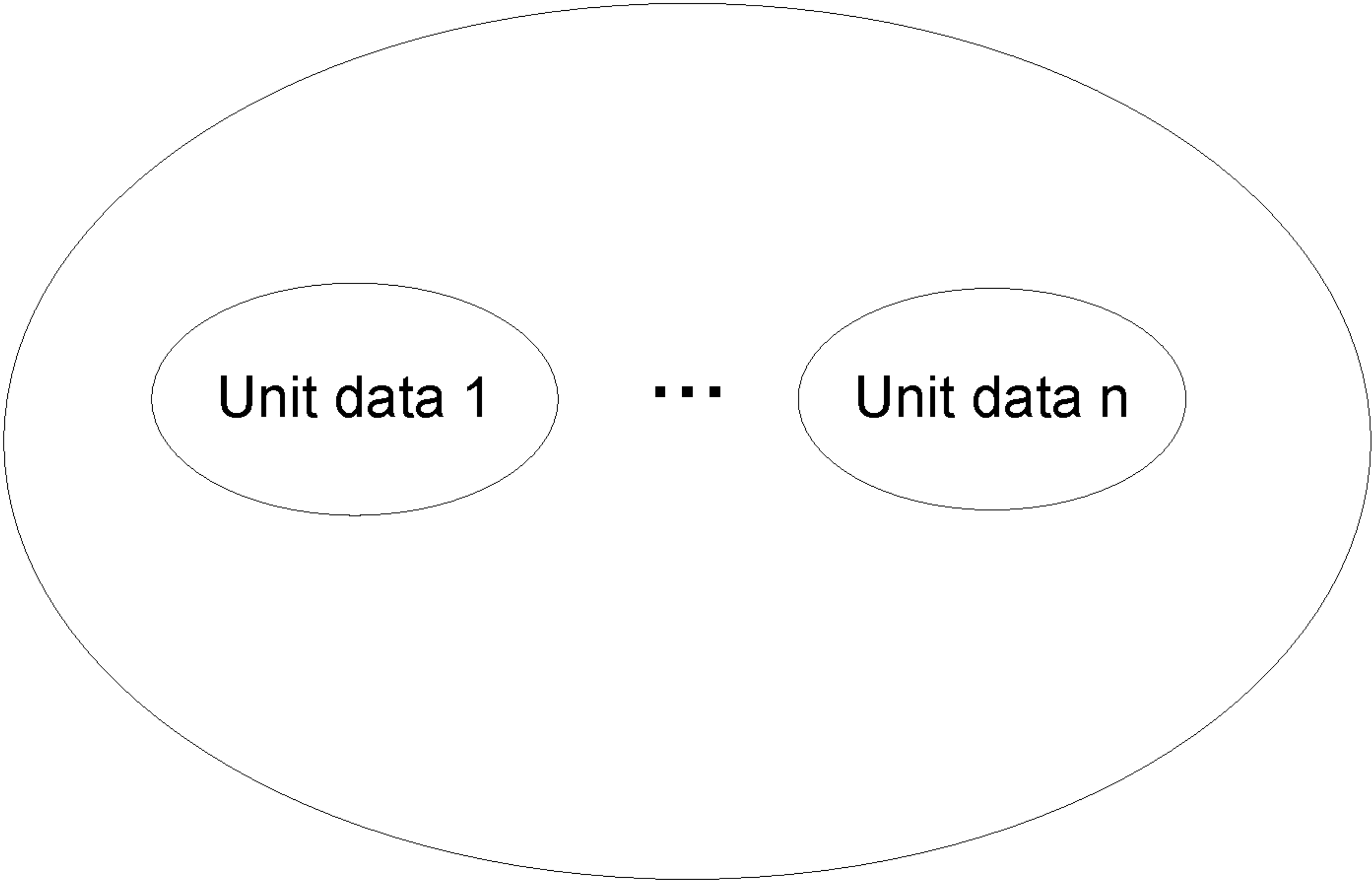


FIG. 5d

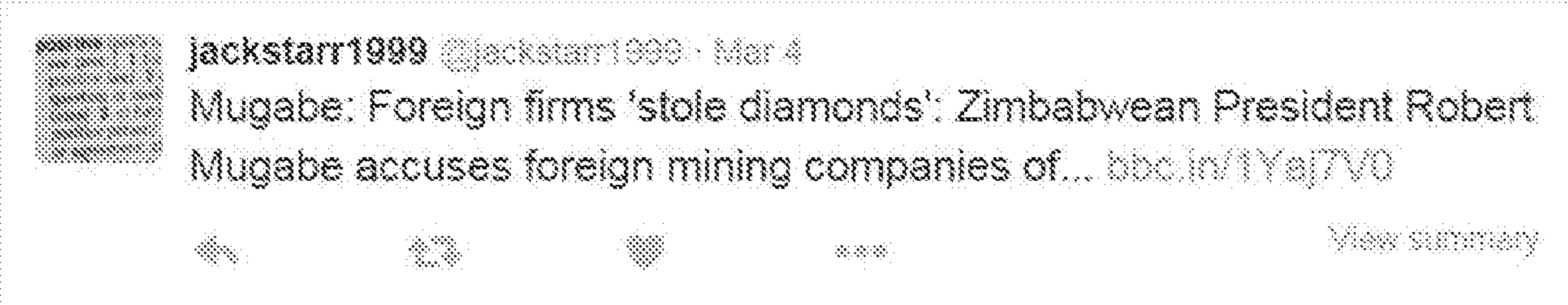


FIG. 5e

```

{
  "_index": "blip2016.03.04",
  "_type": "twitter",
  "_id": "72ea1b70e23411e5a6f5fa163ee42fcd",
  "_score": null,
  "_source": {
    "user_handle": "jackstarr1999",
    "friends_count": 9976,
    "source": "<a href='\"http://twitterfeed.com\"' rel='\"nofollow\">twitterfeed</a>",
    "favorite_count": 0,
    "content_type": "Twitter",
    "urls": [
      {
        "expanded_url": "http://bbc.in/1Yaj7V0",
        "indices": {
          "first": 114,
          "second": 137
        },
        "url": "https://t.co/Zlsuqo6Nri",
        "domain": "bbc.in",
        "display_url": "bbc.in/1Yaj7V0",
        "is_short_url": false
      }
    ],
    "followers_count": 13262,
    "is_retweet": false,
    "text": "Mugabe: Foreign firms 'stole diamonds': Zimbabwean President Robert Mugabe accuses foreign mining companies of... https://t.co/Zlsuqo6Nri",
    "retweet_count": 0,
    "user_id": "268036007",
    "id": "72ea1b70e23411e5a6f5fa163ee42fcd",
    "language": "en",
    "raw": {
      "coordinates": null,
      "retweeted": false,
      "source": "<a href='\"http://twitterfeed.com\"' rel='\"nofollow\">twitterfeed</a>",
      "entities": {
        "hashtags": [],
        "urls": [
          {
            "url": "https://t.co/Zlsuqo6Nri",

```

FIG. 5f

```
"expanded_url": "http://bbc.in/1Yaj7V0",
"display_url": "bbc.in/1Yaj7V0",
"indices": [
  114,
  137
]
},
],
"user_mentions": [],
"symbols": []
},
"favorite_count": 0,
"in_reply_to_status_id_str": null,
"geo": null,
"id_str": "705817833658142720",
"in_reply_to_user_id": null,
"timestamp_ms": "1457115059662",
"truncated": false,
"text": "Mugabe: Foreign firms 'stole diamonds': Zimbabwean President Robert Mugabe
accuses foreign mining companies of... https://t.co/ZIsuqo6Nri",
"retweet_count": 0,
"id": 705817833658142700,
"in_reply_to_status_id": null,
"possibly_sensitive": false,
"filter_level": "low",
"created_at": "Fri Mar 04 18:10:59 +0000 2016",
"place": null,
"favorited": false,
"lang": "en",
"contributors": null,
"in_reply_to_screen_name": null,
"is_quote_status": false,
"in_reply_to_user_id_str": null,
"user": {
  "utc_offset": 28800,
  "name": "jackstarr1999",
  "friends_count": 9976,
  "screen_name": "jackstarr1999",
  "location": "Looking Ahead Maryland",
  "protected": false,
  "url": null,
```

FIG. 5g

```
"profile_image_url":  
"http://pbs.twimg.com/profile_images/3419216884/5fb506f5bfea5ed0b99c2cfa24849c81_normal  
.jpeg",  
"profile_background_color": "C0DEED",  
"profile_use_background_image": true,  
"is_translator": false,  
"geo_enabled": false,  
"description": "buzzing about all kinds of stuff do  
say hello trying  
to stay positive here",  
"profile_link_color": "9EB300",  
"id_str": "268036007",  
"listed_count": 107,  
"default_profile_image": false,  
"followers_count": 13262,  
"profile_image_url_https":  
"https://pbs.twimg.com/profile_images/3419216884/5fb506f5bfea5ed0b99c2cfa24849c81_norm  
al.jpeg",  
"profile_sidebar_border_color": "EBC1C1",  
"profile_background_image_url":  
"http://pbs.twimg.com/profile_background_images/219169952/2.jpg",  
"favourites_count": 494,  
"following": null,  
"default_profile": false,  
"id": 268036007,  
"profile_background_tile": true,  
"contributors_enabled": false,  
"follow_request_sent": null,  
"created_at": "Fri Mar 18 01:18:56 +0000 2011",  
"profile_sidebar_fill_color": "DDEEF6",  
"lang": "en",  
"profile_text_color": "333333",  
"notifications": null,  
"verified": false,  
"time_zone": "Tijuana",  
"profile_banner_url": "https://pbs.twimg.com/profile_banners/268036007/1363413391",  
"statuses_count": 94782,  
"profile_background_image_url_https":  
"https://pbs.twimg.com/profile_background_images/219169952/2.jpg"  
}  
},  
"date": "20160304T18:  
10:59.000Z",  
"possibly_sensitive": false,  
"source_id": "705817833658142720",
```

FIG. 5h

```
    "metadata": {
      "threat_score": 0,
      "channels": [
        "Legal Risks"
      ],
      "sdp.sane.credibility": {
535      "tweet": 0.6819980807625843,
        "user": 3,
        "composite": 2.045994242287753
      },
      "has_profanity": false,
524      "sdp.sane.fact_opinion": {
623      "class": "f",
        "score": 0.7770599430360502
      },
      "tokens": {
        "TERM": [
526      "Mugabe",
        "Foreign",
        "firms",
        "stole",
        "diamonds",
        "Zimbabwean",
        "President",
        "Robert",
        "Mugabe",
        "accuses",
        "foreign",
        "mining",
        "companies",
        "of"
        ],
        "MONEY": [],
        "ALL": [
        "Mugabe",
        "Foreign",
        "firms",
        "stole",
        "diamonds",
        "Zimbabwean",
        "President",
        "Robert",
        "Mugabe",
        "accuses",
```

FIG. 5i

```
"foreign",
"mining",
"companies",
"of",
".",
",",
""",
",",
""",
",",
".",
",",
" ",
" ",
"https://t.co/Zlsuqo6Nri",
".",
",",
""",
",",
""",
",",
".",
",",
" ",
"],
"ENTITY": [
"https://t.co/Zlsuqo6Nri"
],
"JUNK": [
".",
",",
""",
",",
""",
",",
".",
",",
" ",
],
"EMOTICON": [],
"PUNC": [
".",
",",
""",
",",
""",
",",
".",
",",
" ",
],
"EMOJI": [],
"CRISIS": []
},
"origins": [
"onepctpublic",
"onepctfilter"
],
"sdp.sane.spam_category": "news
like"
},
```

FIG. 5j

```
"user": {
  "name": "jackstarr1999",
  "friends_count": 9976,
  "screen_name": "jackstarr1999",
  "location": "Looking Ahead Maryland",
  "description": "buzzing about all kinds of stuff do
say hello trying
to stay positive here",
  "listed_count": 107,
  "user_avatar":
"http://pbs.twimg.com/profile_images/3419216884/
5fb506f5bfea5ed0b99c2cfa24849c81_normal
.jpeg",
  "followers_count": 13262,
  "is_verified": false,
  "favourites_count": 494,
  "is_default_profile": false,
  "has_profile_image": true,
  "id": "268036007",
  "language": "en",
  "created_at": "20110318T01:
18:56.000Z",
  "statuses_count": 94782,
  "is_protected": false
},
},
"fields": {
  "raw.user.created_at": [
1300411136000
],
  "raw.timestamp_ms": [
1457115059662
],
  "date": [
1457115059000
],
  "user.created_at": [
1300411136000
],
  "raw.created_at": [
1457115059000
]
},
"sort": [
1457115059000
]
}
```

FIG. 5k

```

{
  "_id" : ObjectId("56d9d362498e88c331ace10d"),
  "cluster_id" : "705817833658142720",
  "created_at" : ISODate("20160304T18:
26:41Z"),
  "server_created_at" : ISODate("20160304T18:
26:42.203Z"),
  "first_tweeted_at" : ISODate("20160304T18:
10:59Z"),
  "merged_at" : ISODate("20160304T18:
26:41Z"),
  "news_score" : 0.970382710245269,
  "cluster_size" : 3,
  "tweet_count" : 3,
  "retweet_count" : 0,
  "verify_sort" : 1,
  "merge_count" : 1,
  "verify_count" : 1,
  "topic" : "POLITICS",
  "summary" : "Mugabe: Foreign firms 'stole diamonds': Zimbabwean President
Robert
Mugabe accuses foreign mining companies of...",
  "channels" : [ ],
  "tweets" : [
    "705817833658142720",
    "705821784696696832",
    "705817993037553664"
  ],
  "proper_nouns" : [
    {
      "token" : "robert_mugabe",
      "ids" : [
        "705817833658142720",
        "705821784696696832",
        "705817993037553664"
      ]
    },
    {
      "token" : "mugabe",
      "ids" : [
        "705817833658142720",
        "705821784696696832",
        "705817993037553664"
      ]
    }
  ]
}

```

FIG. 51

```
"hashtags" : [  
  {  
    "token" : "news",  
    "ids" : [  
      "705821784696696832"  
    ]  
  },  
  {  
    "token" : "companies",  
    "tag_type" : "COMMON_NOUN",  
    "ids" : [  
      "705817833658142720",  
      "705817993037553664"  
    ]  
  },  
  {  
    "token" : "mining",  
    "tag_type" : "COMMON_NOUN",  
    "ids" : [  
      "705817833658142720",  
      "705821784696696832",  
      "705817993037553664"  
    ]  
  },  
  {  
    "token" : "president",  
    "tag_type" : "COMMON_NOUN",  
    "ids" : [  
      "705817833658142720",  
      "705821784696696832",  
      "705817993037553664"  
    ]  
  },  
  {  
    "token" : "diamonds",  
    "tag_type" : "COMMON_NOUN",  
    "ids" : [  
      "705817833658142720",  
      "705821784696696832",  
      "705817993037553664"  
    ]  
  },  
  {  
    "token" : "firms",  
    "tag_type" : "COMMON_NOUN",  
    "ids" : [  
      "705817833658142720",  
      "705821784696696832",  
      "705817993037553664"  
    ]  
  }  
],
```

FIG. 5m

```

    "urls" : [
      "http://bit.ly/bbcNews",
      "http://bbc.in/1Yaj7V0"
    ],
    "unit_clusters" : [
      {
        "tweets" : [
          "705817833658142720",
          "705817993037553664",
          "705821784696696832"
        ],
        "merged_at" :
        ISODate("20160304T18:
        26:41Z")
      }
    ],
    "locations" : [ ],
    "merge_history" : [
      {
        "date" : ISODate("20160304T18:
        26:41Z"),
        "merge_id" : 1
      }
    ],
    "retweet_hierarchy" : [
      {
        "parent" : "705817833658142720",
        "size" : 0,
        "children" : [ ]
      },
      {
        "parent" : "705821784696696832",
        "size" : 0,
        "children" : [ ]
      },
      {
        "parent" : "705817993037553664",
        "size" : 0,
        "children" : [ ]
      }
    ],
    "verify_history" : [
      {
        "date" : ISODate("20160304T18:
        26:41Z"),
        "score" : 1
      }
    ],
    "verifiability" : true
  }
}
```

550

506b

FIG. 5n

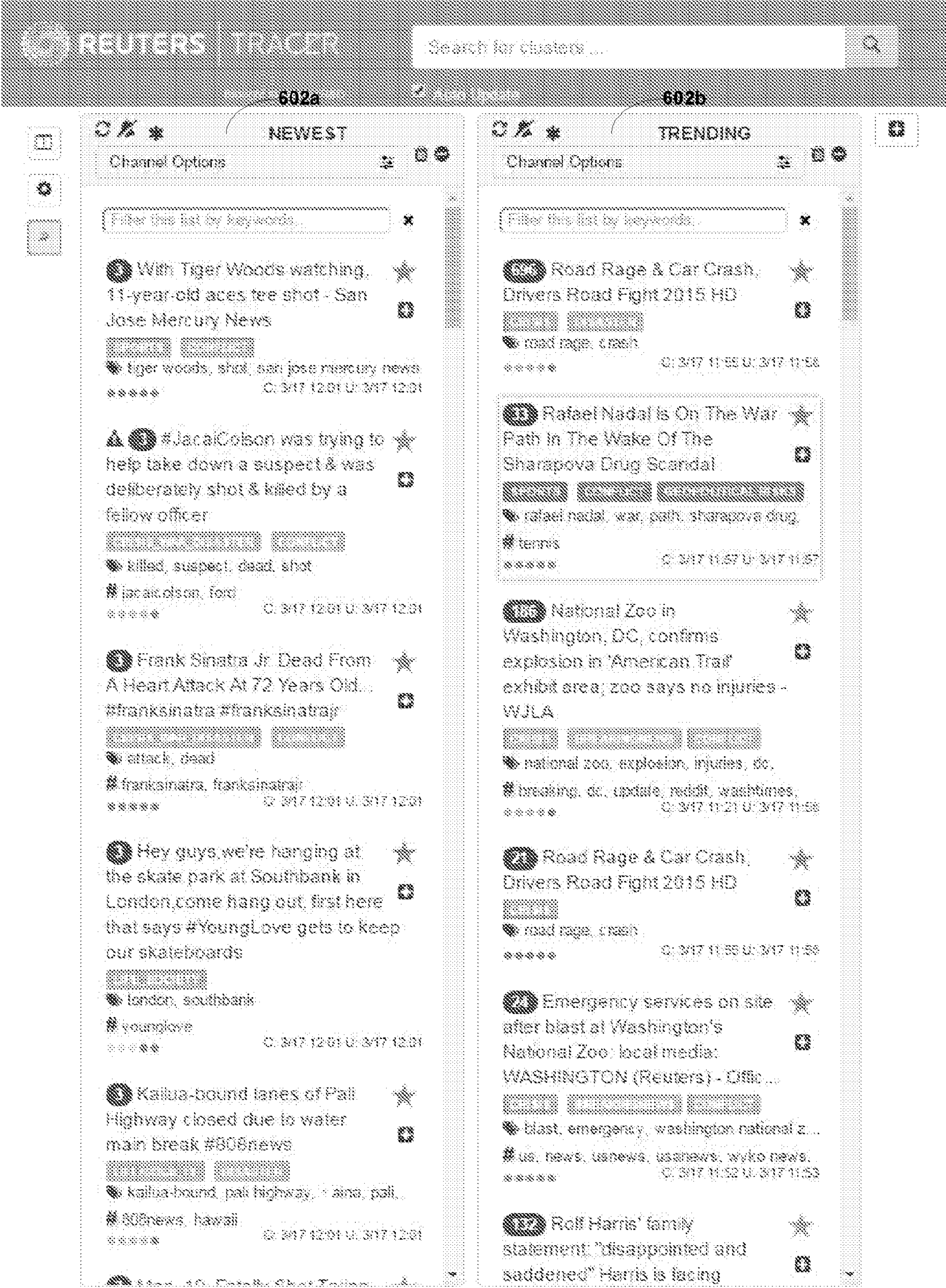


FIG. 6a

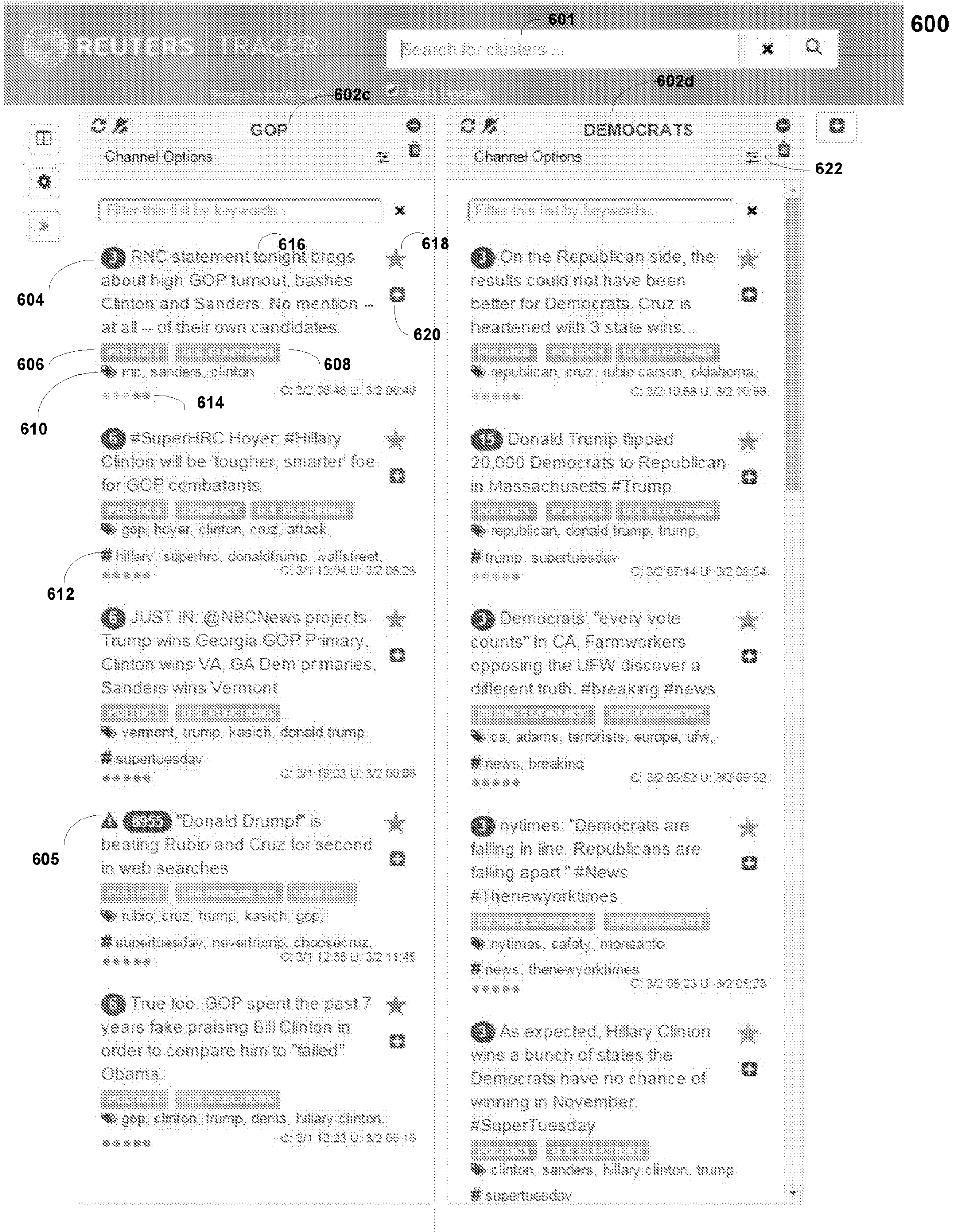


FIG. 6b

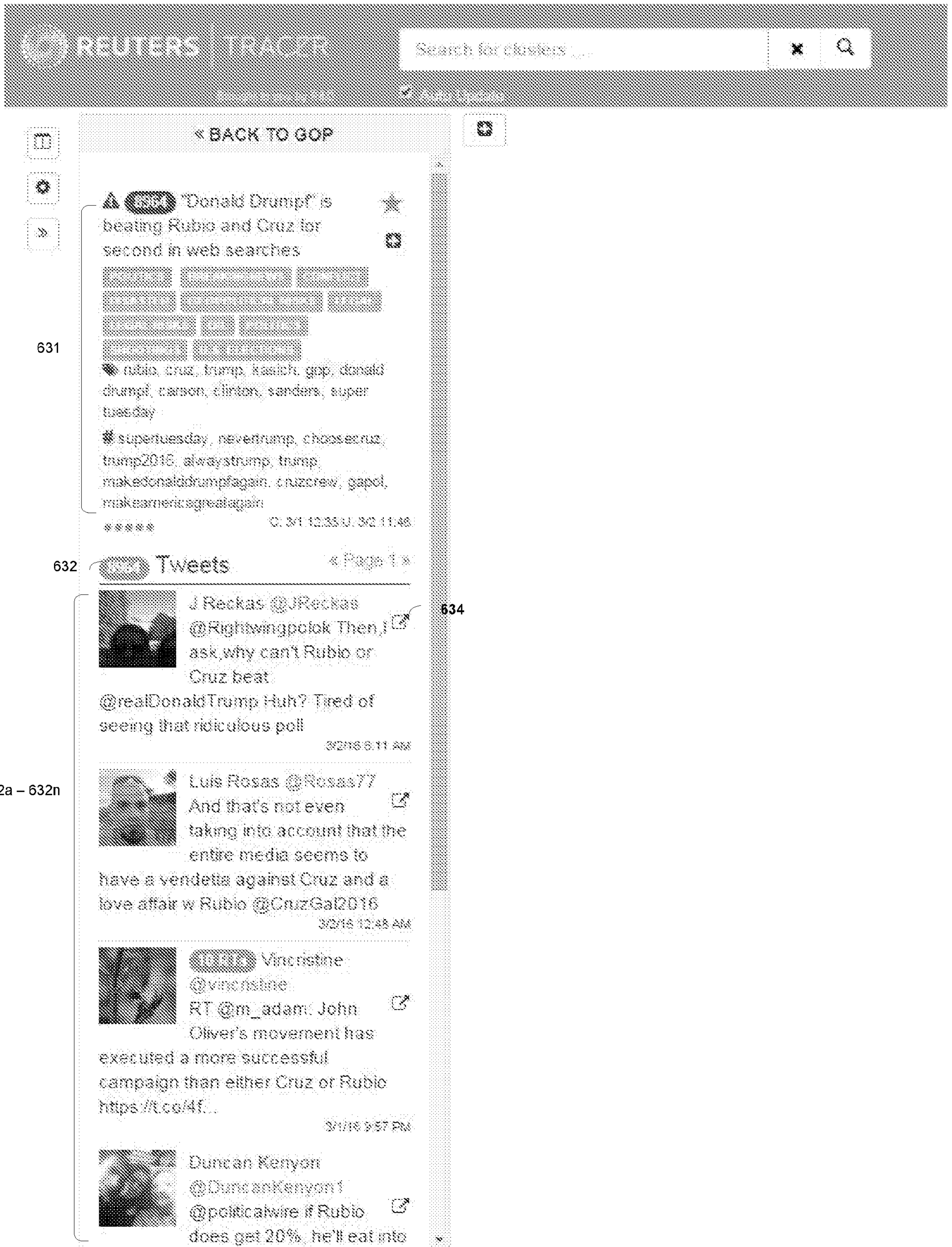


FIG. 6c

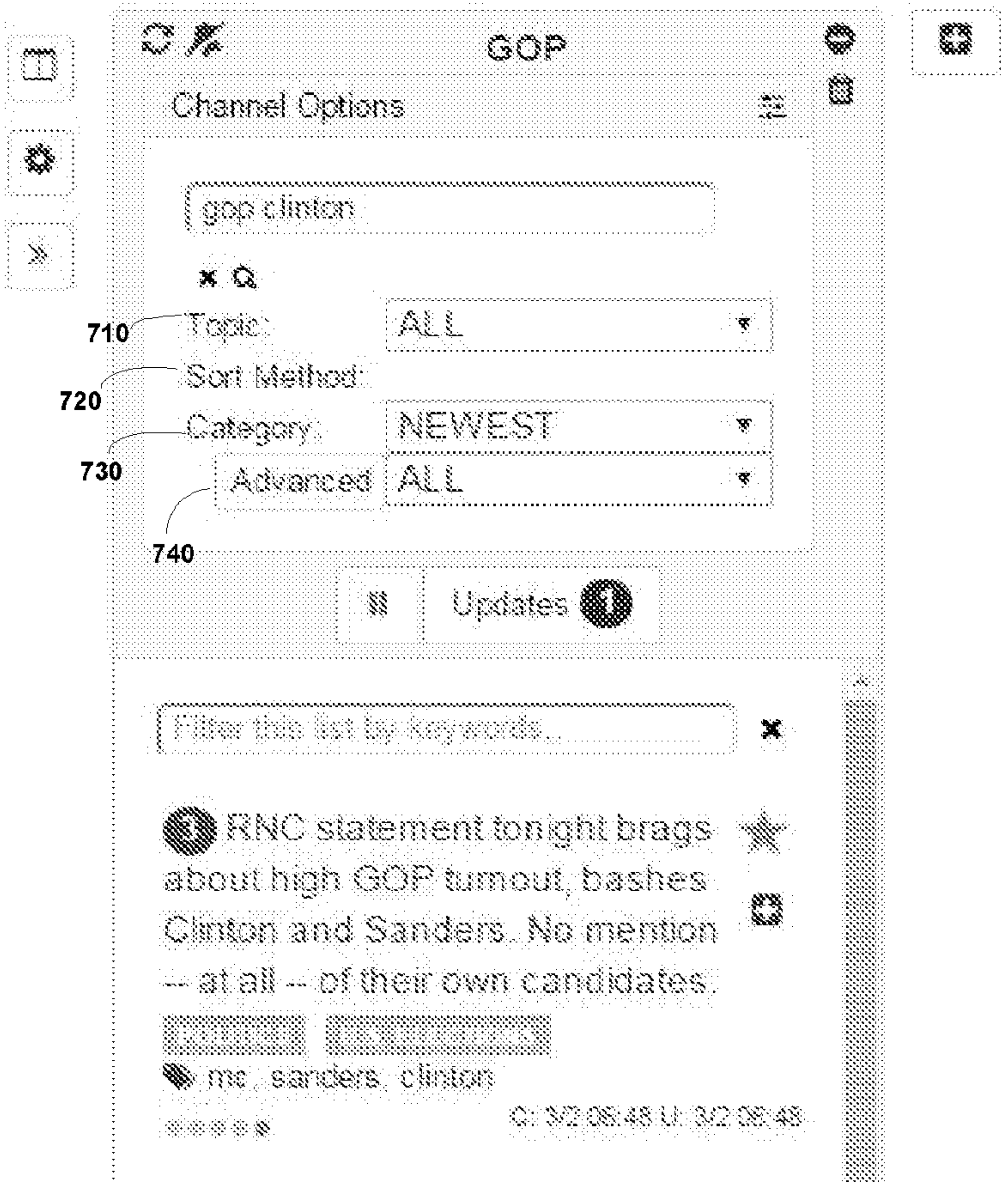


FIG. 7a

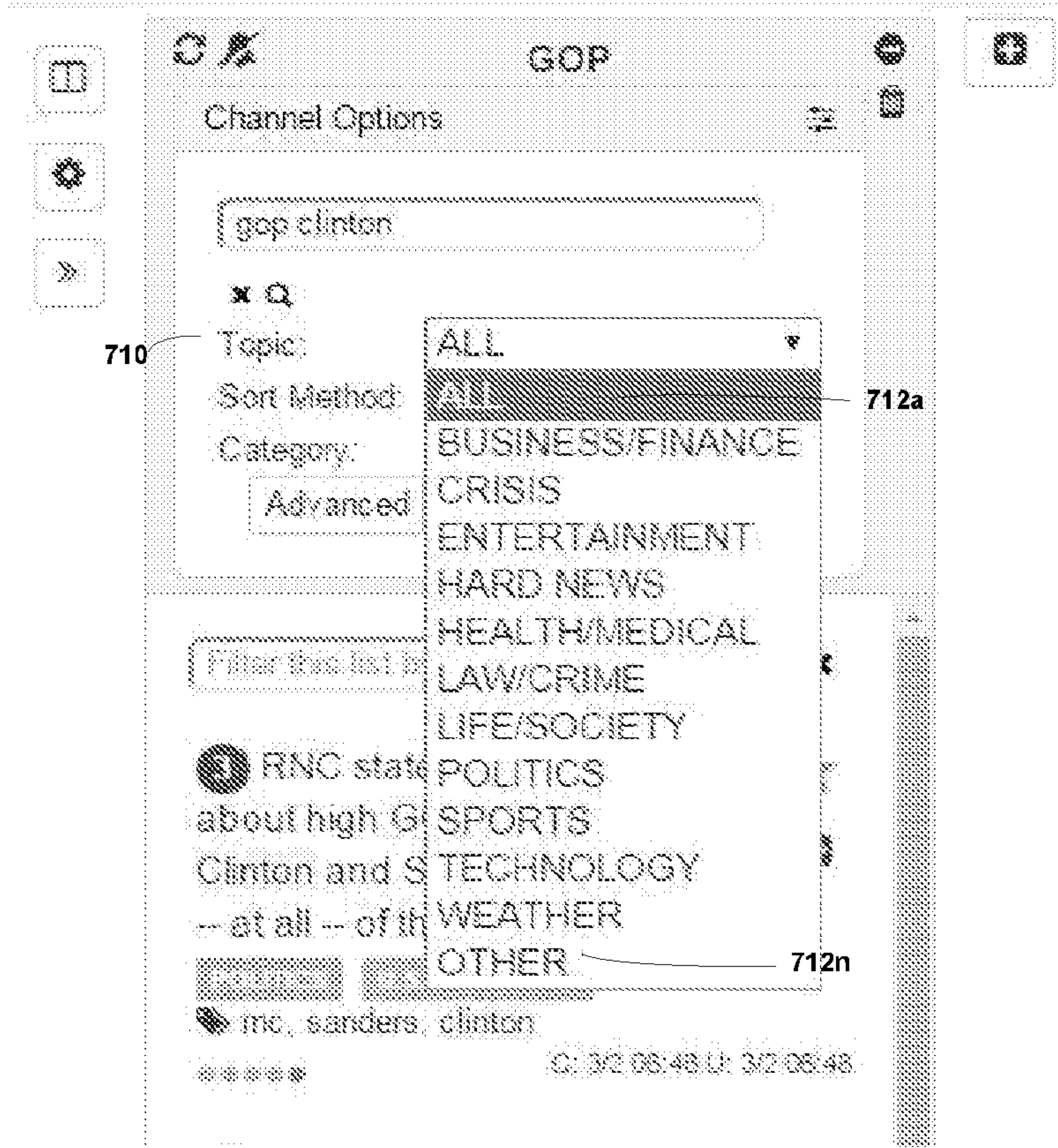


FIG. 7b

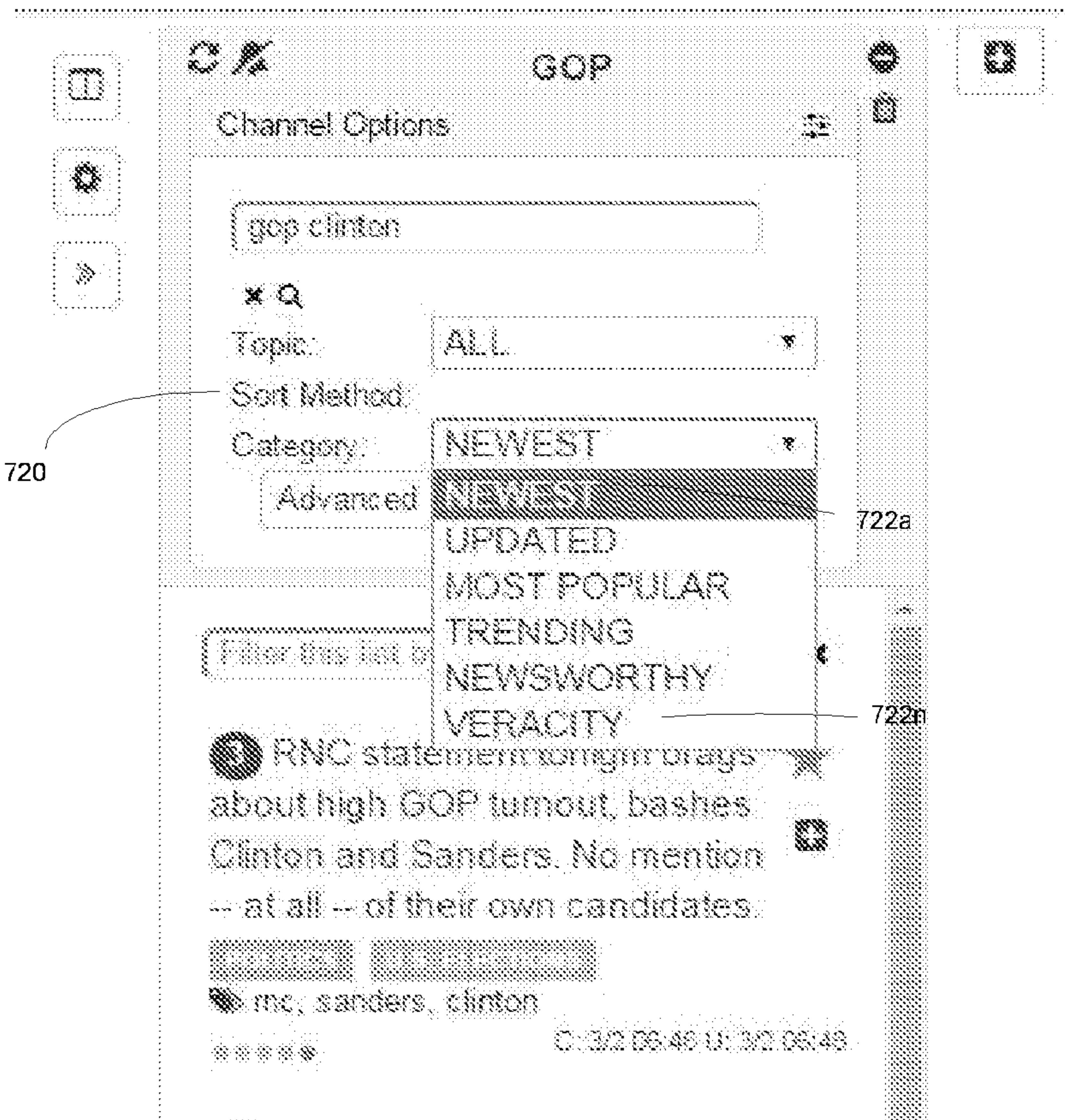


FIG. 7c

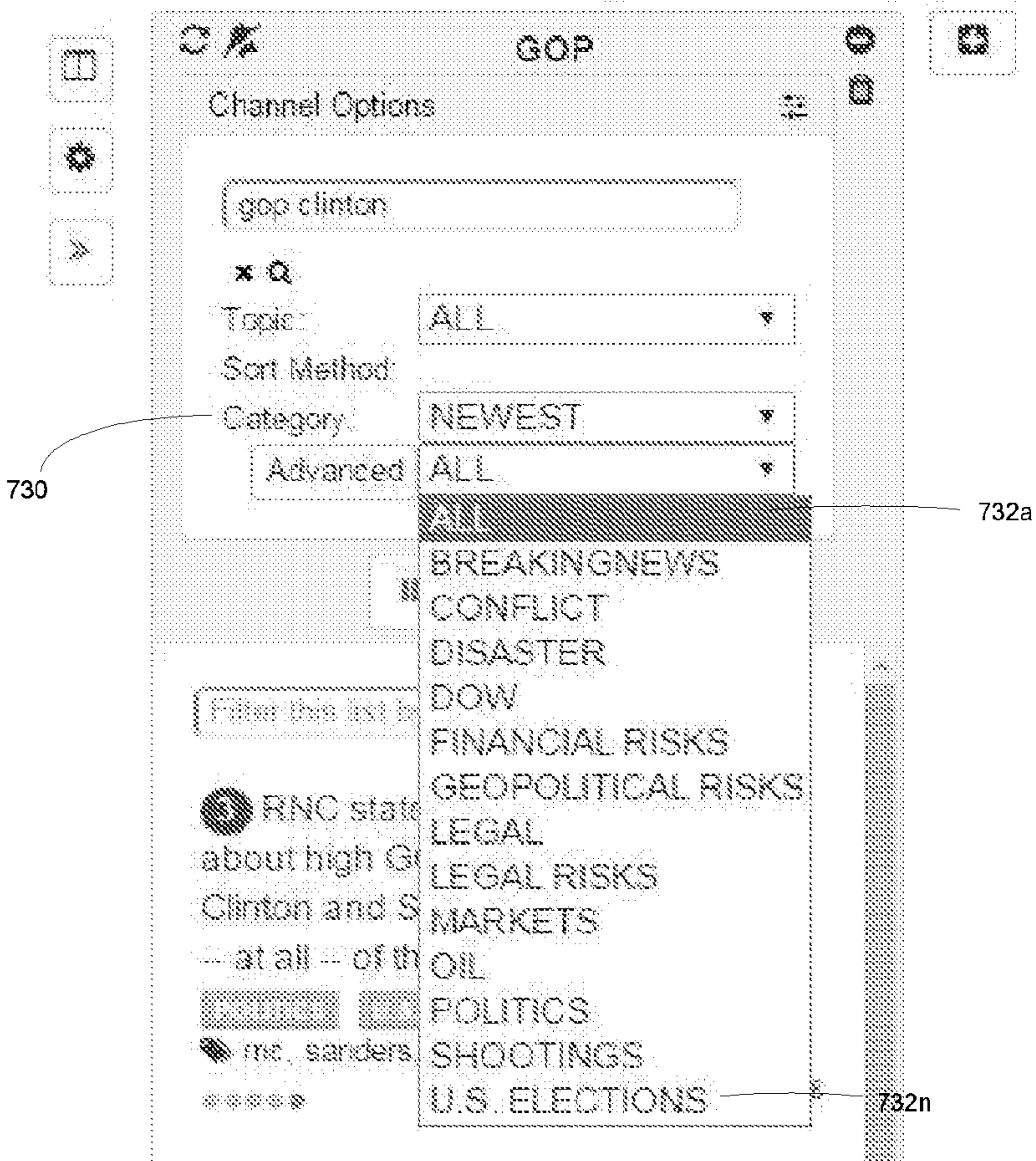


FIG. 7d

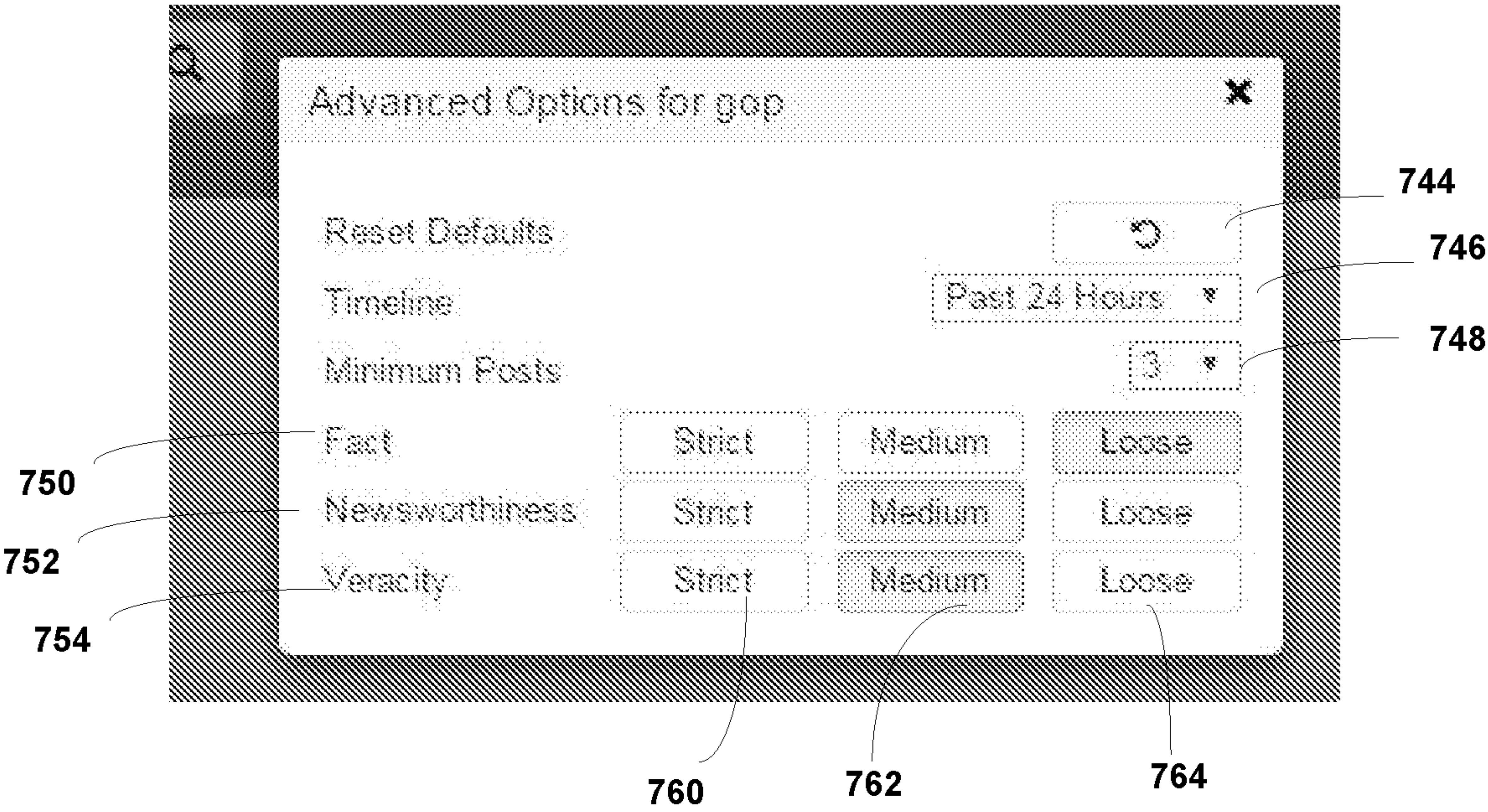


FIG. 7e