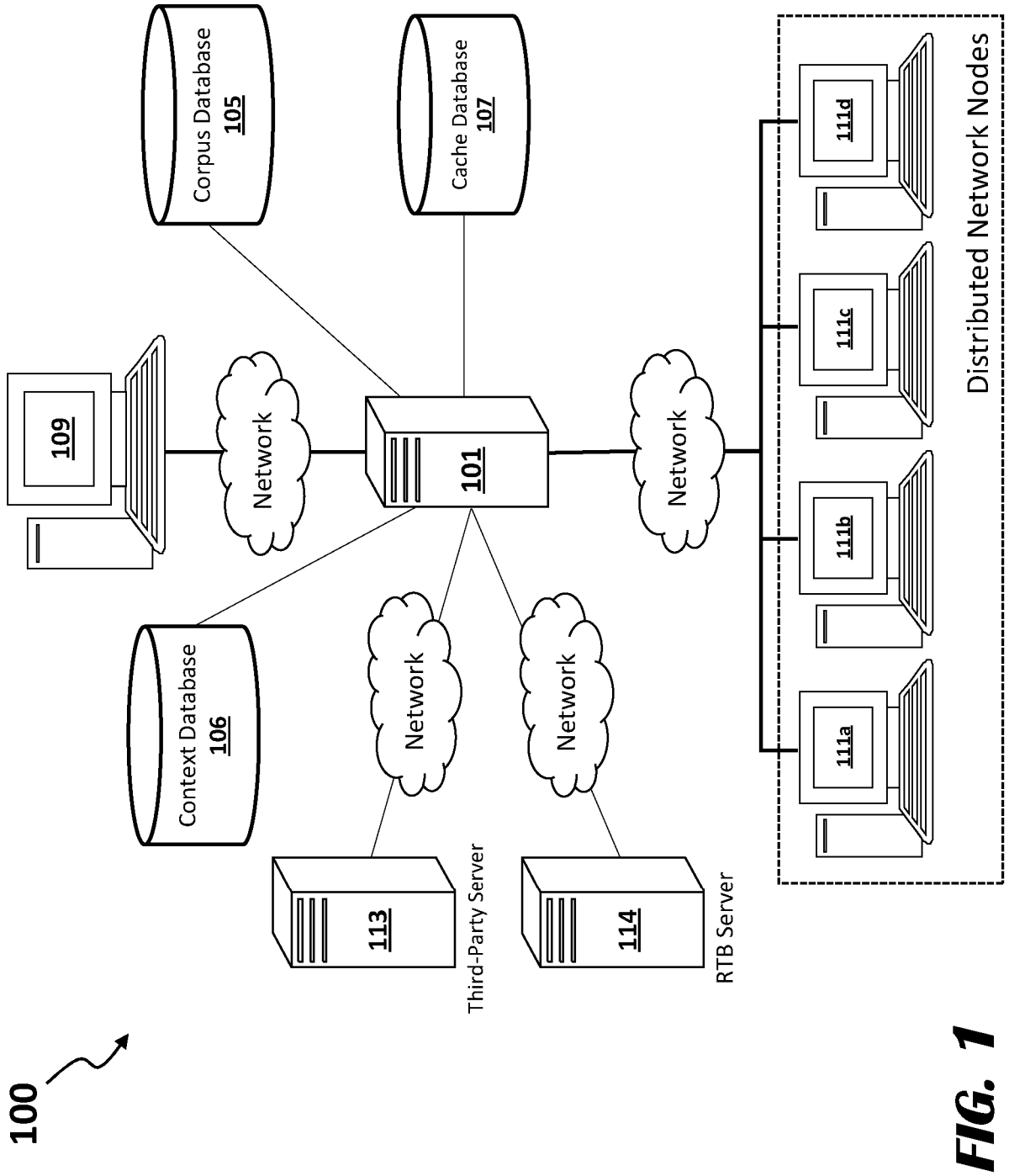
100
Corpus Database
105
Cache Database
107
109
Network
101
Network
Context Database
106
Network
Network
113
Third-Party Server
114
RTB Server
111a
111b
111c
111d
Distributed Network Nodes

FIG. 1

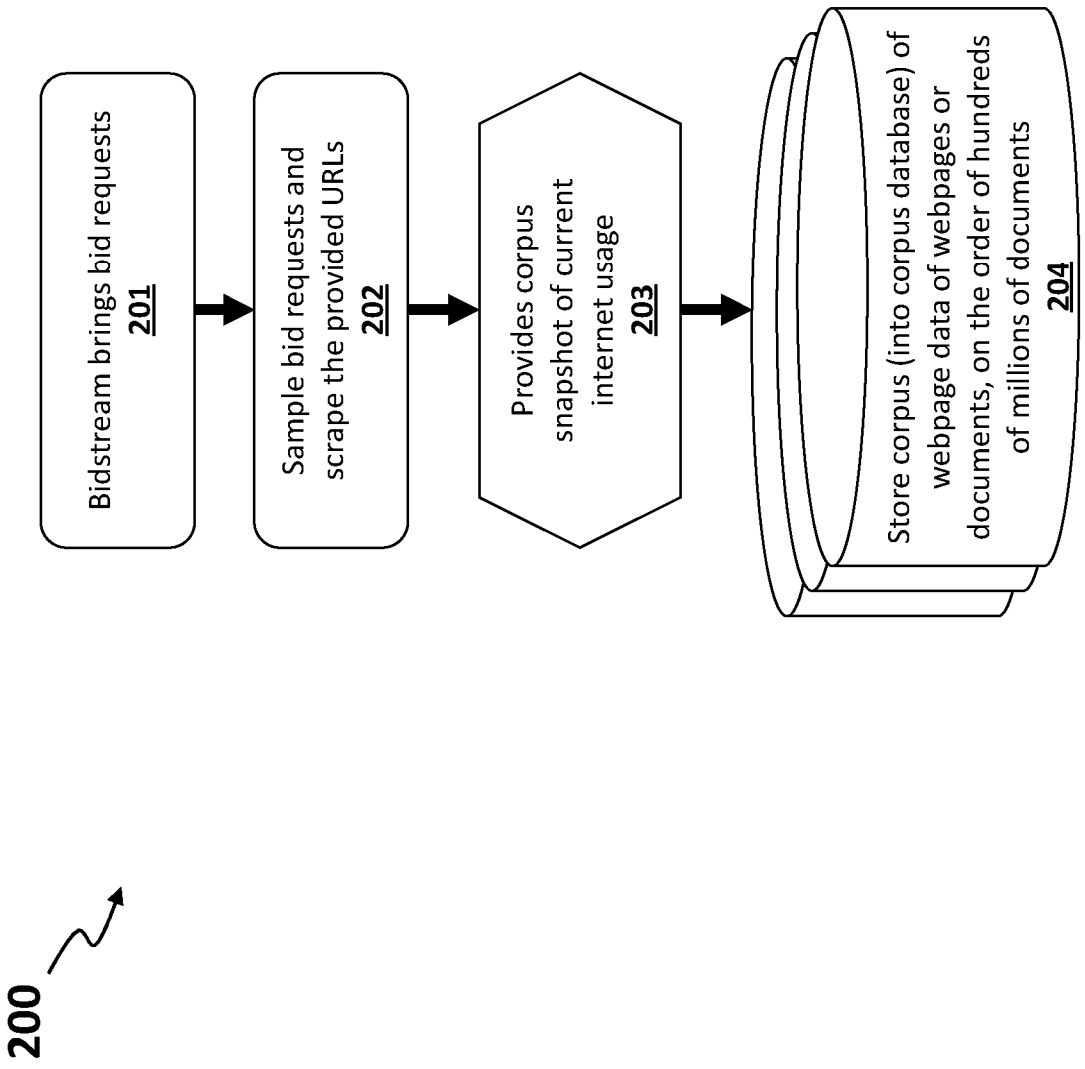
200
Bidstream brings bid requests
201
Sample bid requests and scrape the provided URLs
202
Provides corpus snapshot of current internet usage
203
Store corpus (into corpus database) of webpage data of webpages or documents, on the order of hundreds of millions of documents
204

FIG. 2

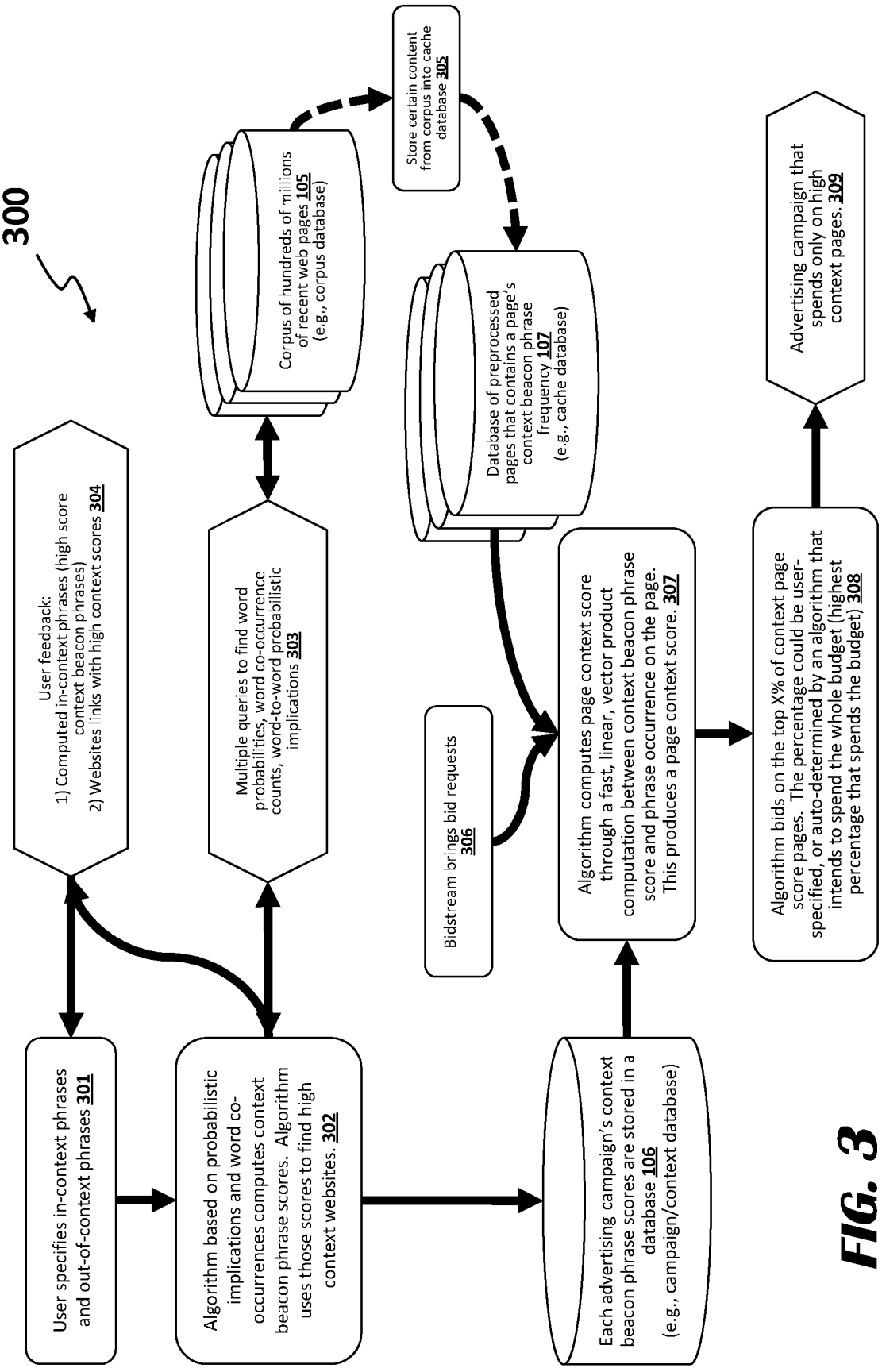
300
User specifies in-context phrases and out-of-context phrases 301
Algorithm based on probabilistic implications and word co-occurrences computes context beacon phrase scores. Algorithm uses those scores to find high context websites. 302
Each advertising campaign's context beacon phrase scores are stored in a database 106 (e.g., campaign/context database)
User feedback:
1) Computed in-context phrases (high score context beacon phrases)
2) Websites links with high context scores 304
Multiple queries to find word probabilities, word co-occurrence counts, word-to-word probabilistic implications 303
Corpus of hundreds of millions of recent web pages 105 (e.g., corpus database)
Store certain content from corpus into cache database 305
Database of preprocessed pages that contains a page's context beacon phrase frequency 107 (e.g., cache database)
Bidstream brings bid requests 306
Algorithm computes page context score through a fast, linear, vector product computation between context beacon phrase score and phrase occurrence on the page. This produces a page context score. 307
Algorithm bids on the top X% of context page score pages. The percentage could be user-specified, or auto-determined by an algorithm that intends to spend the whole budget (highest percentage that spends the budget) 308
Advertising campaign that spends only on high context pages. 309

FIG. 3

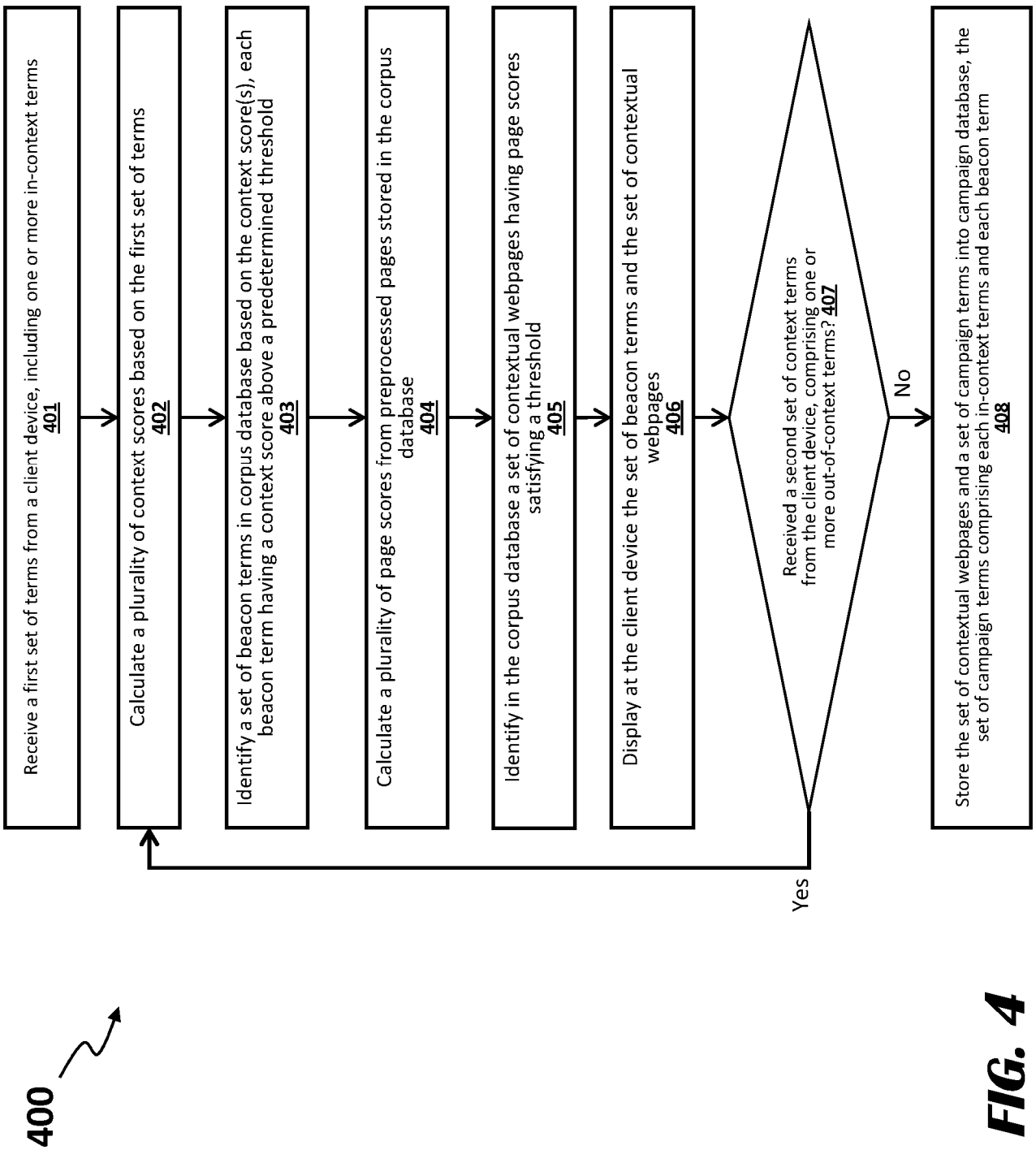
400
Receive a first set of terms from a client device, including one or more in-context terms 401
Calculate a plurality of context scores based on the first set of terms 402
Identify a set of beacon terms in corpus database based on the context score(s), each beacon term having a context score above a predetermined threshold 403
Calculate a plurality of page scores from preprocessed pages stored in the corpus database 404
Identify in the corpus database a set of contextual webpages having page scores satisfying a threshold 405
Display at the client device the set of beacon terms and the set of contextual webpages 406
Received a second set of context terms from the client device, comprising one or more out-of-context terms? 407
Yes
No
Store the set of contextual webpages and a set of campaign terms into campaign database, the set of campaign terms comprising each in-context terms and each beacon term 408

FIG. 4

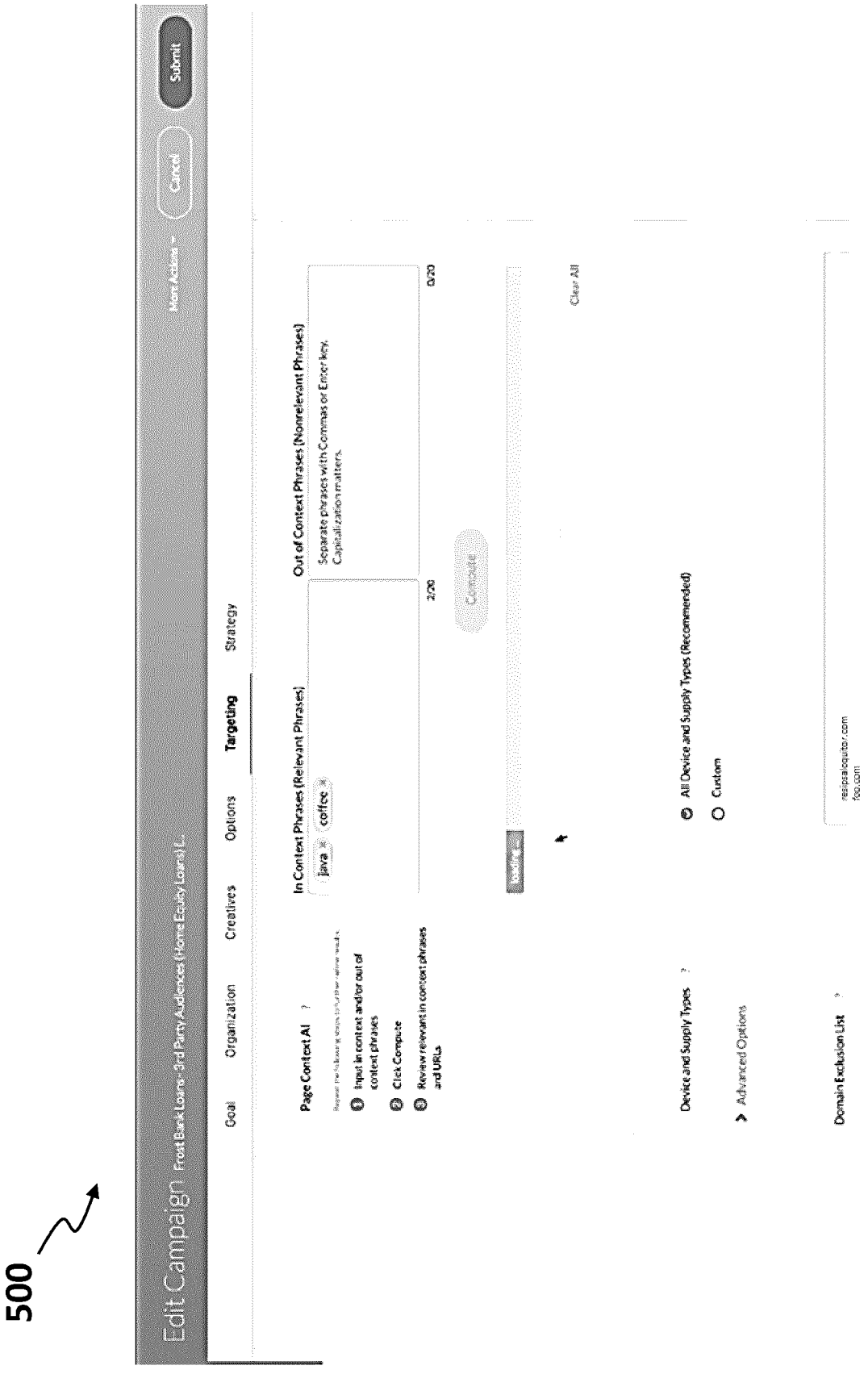
500
Edit Campaign
Goal
Organization
Creatives
Options
Targeting
Strategy
More Actions
Cancel
Submit
Page Context AI
1 Input in context and/or out of context phrases
2 Click Compute
3 Review relevant in context phrases and URLs
In Context Phrases (Relevant Phrases)
Java
coffee
2/20
Compute
Out of Context Phrases (Nonrelevant Phrases)
Separate phrases with Commas or Enter key. Capitalization matters.
0/20
Clear All
Device and Supply Types
All Device and Supply Types (Recommended)
Custom
Advanced Options
Domain Exclusion List
respiratoire.com
foo.com

FIG. 5

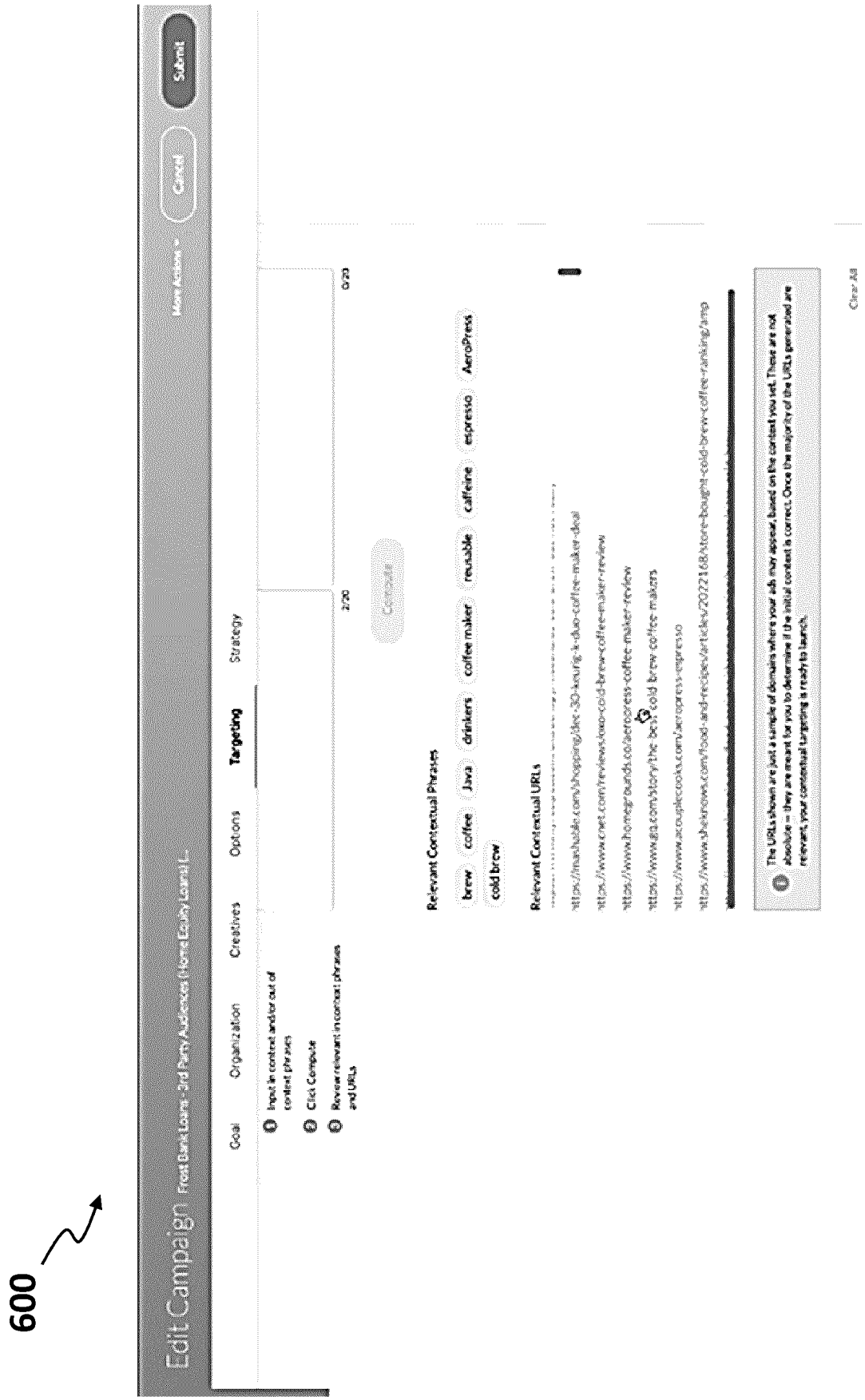
600
Edit Campaign
Goal
Organization
Creatives
Options
Targeting
Strategy
Submit
Cancel
Relevant Contextual Phrases
brew
coffee
Java
drinkers
coffee maker
reusable
caffeine
espresso
AeroPress
cold brew
Relevant Contextual URLs
https://www.cnet.com/reviews/oxo-cold-brew-coffee-maker-review
https://www.homegrounds.co/aeropress-coffee-maker-review
https://www.ala.com/blog/the best cold brew coffee makers
https://www.acouplecooks.com/aeropress-espresso
https://www.thekitchn.com/food-and-recipes/articles/2022168Store-bought-cold-brew-coffee-ranking.jpg
Clear All

FIG. 6

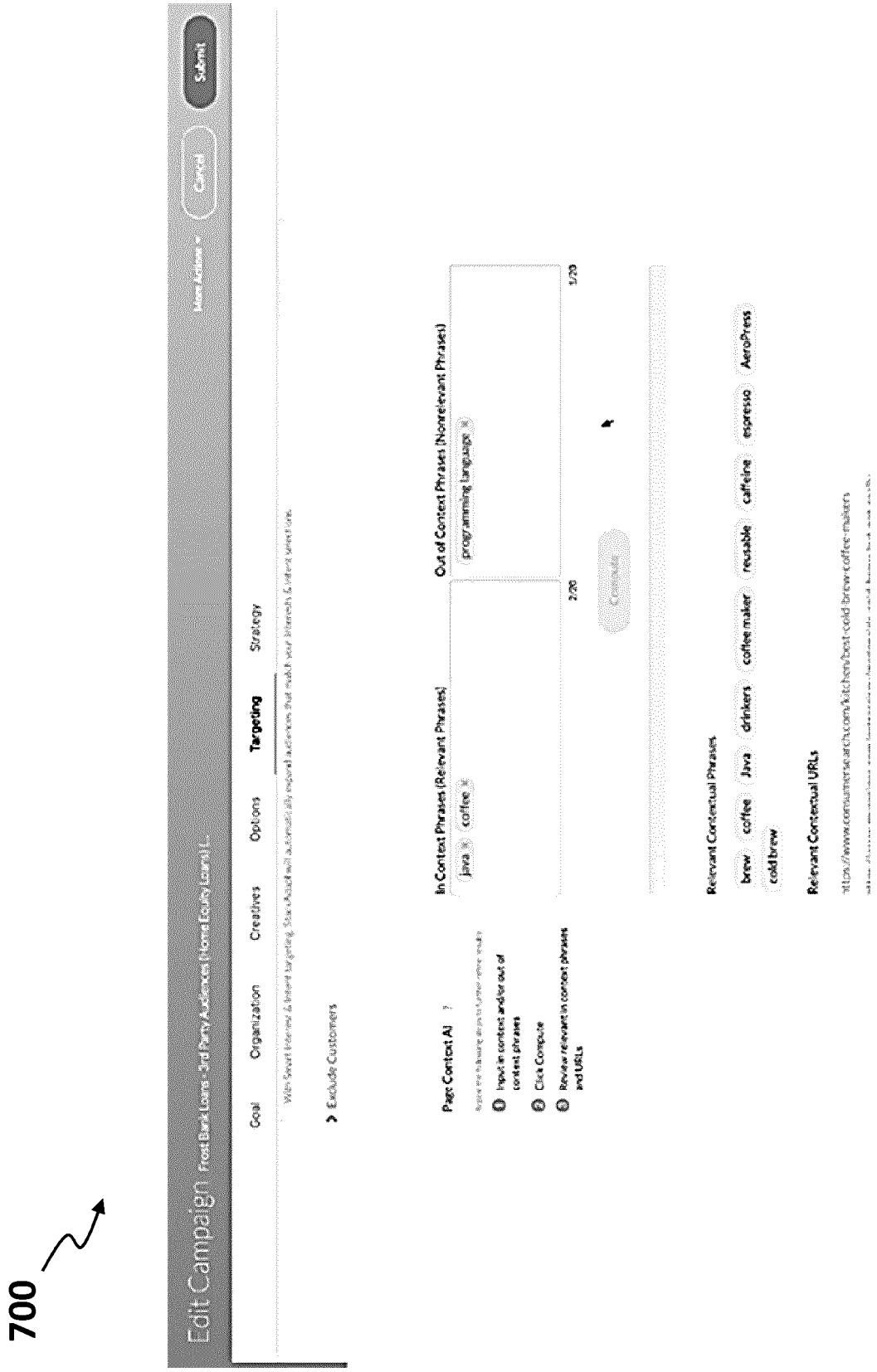
700
Edit Campaign
Goal
Organization
Creatives
Options
Targeting
Strategy
Cancel
Submit
Exclude Customers
Page Context AI
1. Input in context and/or out of context phrases
2. Click Compute
3. Review relevant in context phrases and URLs
In Context Phrases (Relevant Phrases)
Java
coffee
2/20
Out of Context Phrases (Nonrelevant Phrases)
programming language
1/20
Compute
Relevant Contextual Phrases
brew
coffee
Java
drinkers
coffee maker
reusable
caffeine
espresso
AeroPress
cold brew
Relevant Contextual URLs

FIG. 7

800

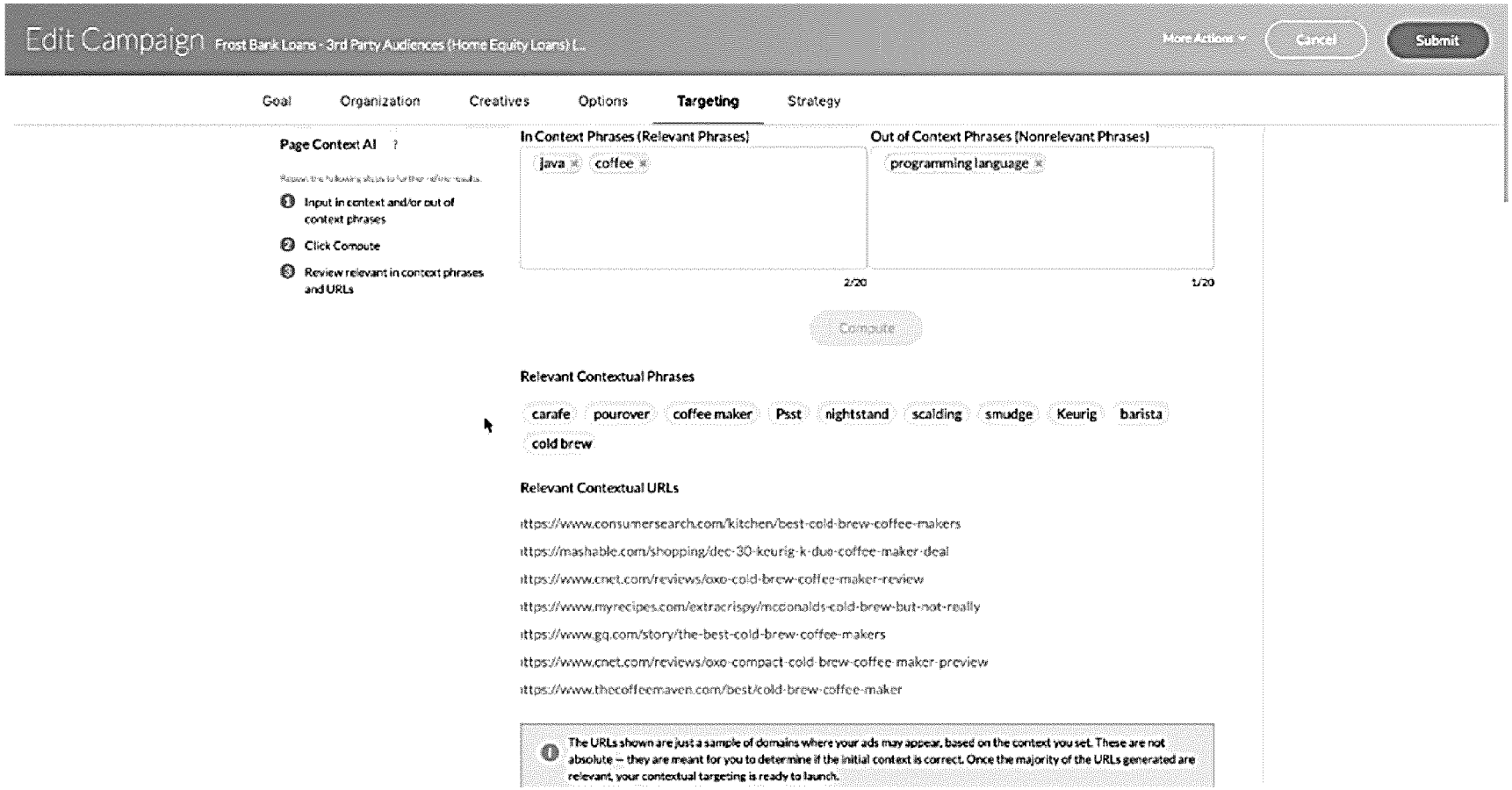
Edit Campaign
Frost Bank Loans - 3rd Party Audiences (Home Equity Loans) L...
More Actions
Cancel
Submit
Goal
Organization
Creatives
Options
Targeting
Strategy
Page Context AI
1 Input in context and/or out of context phrases
2 Click Compute
3 Review relevant in context phrases and URLs
In Context Phrases (Relevant Phrases)
java
coffee
2/20
Out of Context Phrases (Nonrelevant Phrases)
programming language
1/20
Compute
Relevant Contextual Phrases
carafe
pourover
coffee maker
Psst
nightstand
scalding
smudge
Keurig
barista
cold brew
Relevant Contextual URLs
https://www.consumersearch.com/kitchen/best-cold-brew-coffee-makers
https://mashable.com/shopping/dec-30-keurig-k-duo-coffee-maker-deal
https://www.cnet.com/reviews/oxo-cold-brew-coffee-maker-review
https://www.myrecipes.com/extracrispy/mcdonalds-cold-brew-but-not-really
https://www.gq.com/story/the-best-cold-brew-coffee-makers
https://www.cnet.com/reviews/oxo-compact-cold-brew-coffee-maker-preview
https://www.thecoffeemaven.com/best/cold-brew-coffee-maker
The URLs shown are just a sample of domains where your ads may appear, based on the context you set. These are not absolute — they are meant for you to determine if the initial context is correct. Once the majority of the URLs generated are relevant, your contextual targeting is ready to launch.

FIG. 8