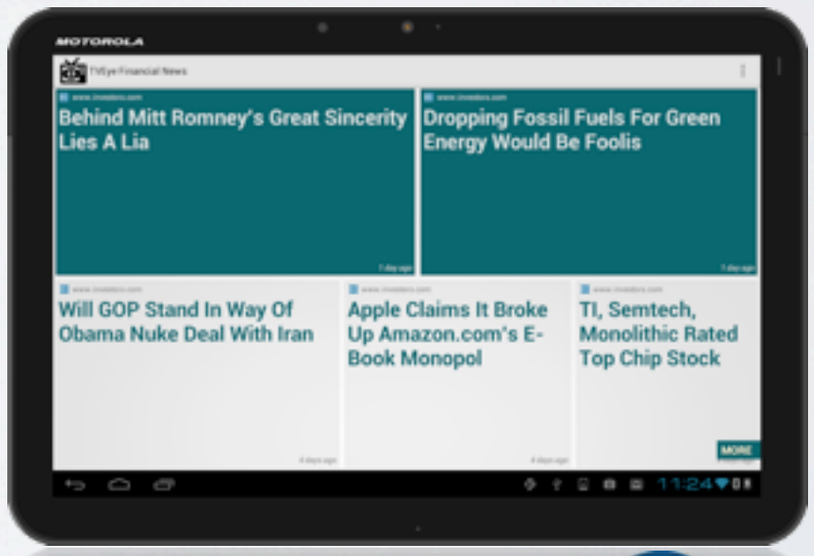
TVEYE FINANCIAL NEWS

Grand Valley State University
School of Computing
CIS467 Senior Capstone Project

Nathan Bowman, Erin Carrier, Cory Hagerman, Greg Zavitz



GRAND VALLEY STATE UNIVERSITY

WHO WE ARE

Nathan Bowman

Erin Carrier

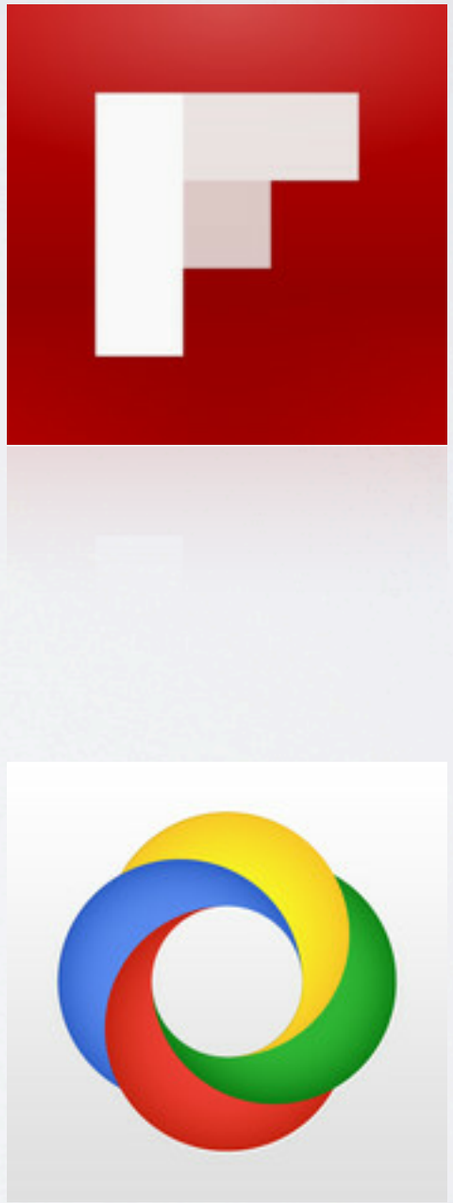
Cory Hagerman

Greg Zavitz

GRAND VALLEY STATE UNIVERSITY

THE PROJECT

- Android tablet application to accompany financial TV
- Magazine style news reader
- Assist back-end in learning user interest preferences



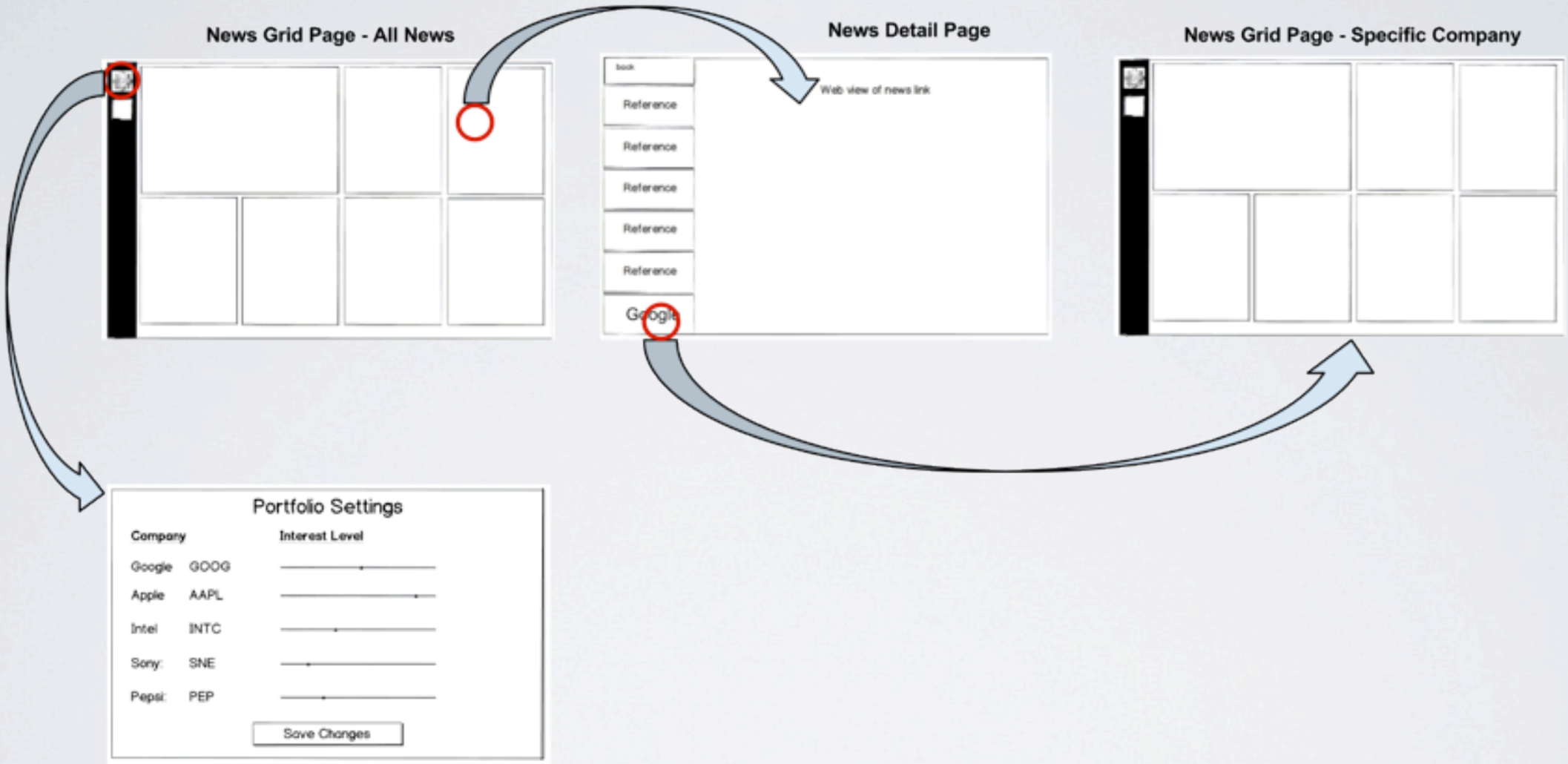
GRAND VALLEY STATE UNIVERSITY

FIRST STEPS WITH ANDROID

- Learning the basic fundamentals of Android
- Initial impressions of Android development
  - Using the available documentation
  - Availability of relevant code samples

Grand Valley State University

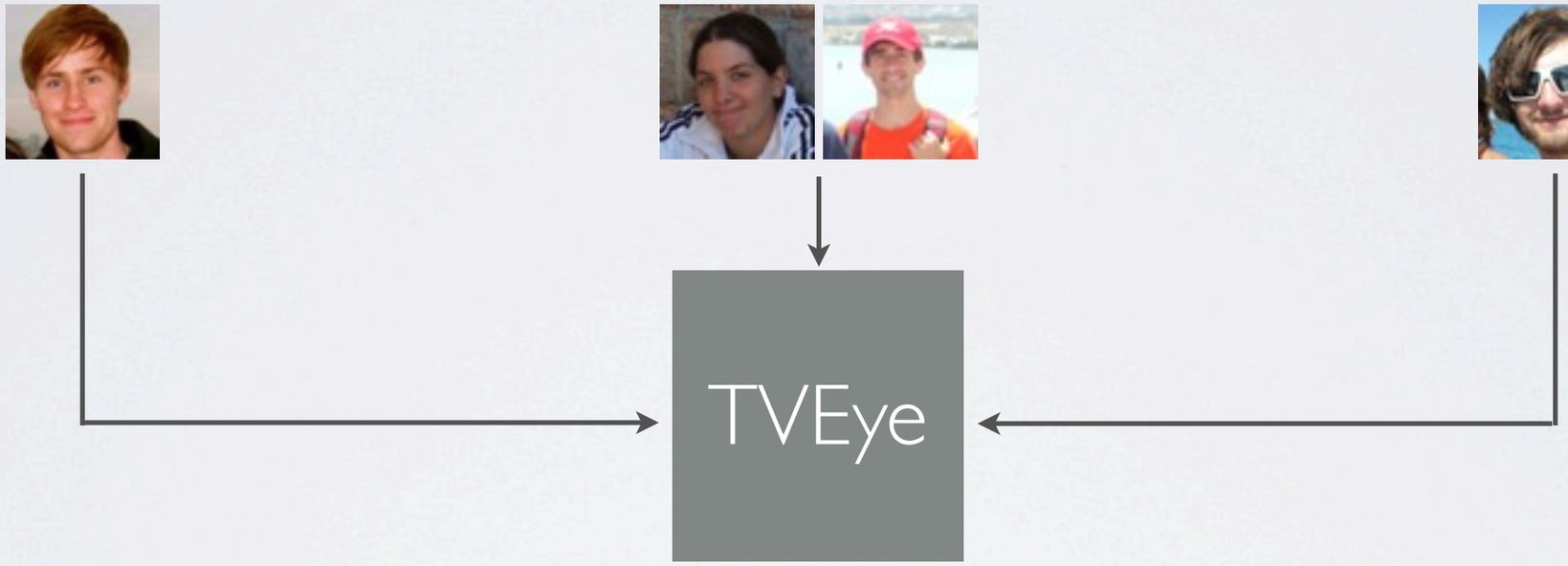
DESIGNING THE APP



- Application layouts and flow using myBalsamiq
- Design critique meetings

GRAND VALLEY STATE UNIVERSITY

ITS ALL ABOUT TEAM WORK



- Activity modularity made it easy to assign tasks
- Distributed source control made conflicts minimal

GRAND VALLEY STATE UNIVERSITY

APPLICATION DRILL-DOWN

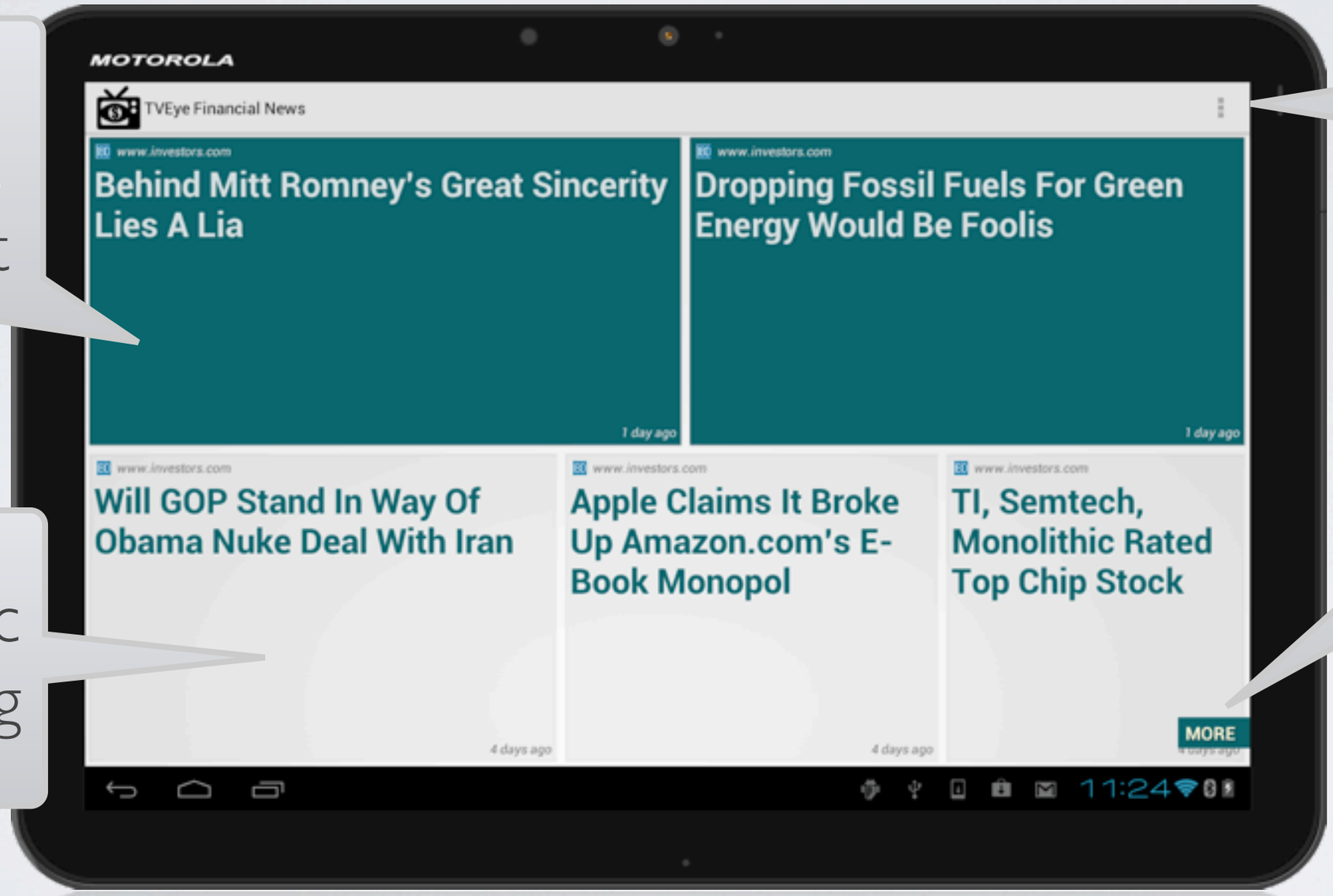
Overall tablet application design inspired by the web application version of TVEye

GRAND VALLEY STATE UNIVERSITY

APPLICATION DRILL-DOWN

High interest highlight

Additional settings



Dynamic tile sizing

More articles

GRAND VALLEY STATE UNIVERSITY

APPLICATION DRILL-DOWN

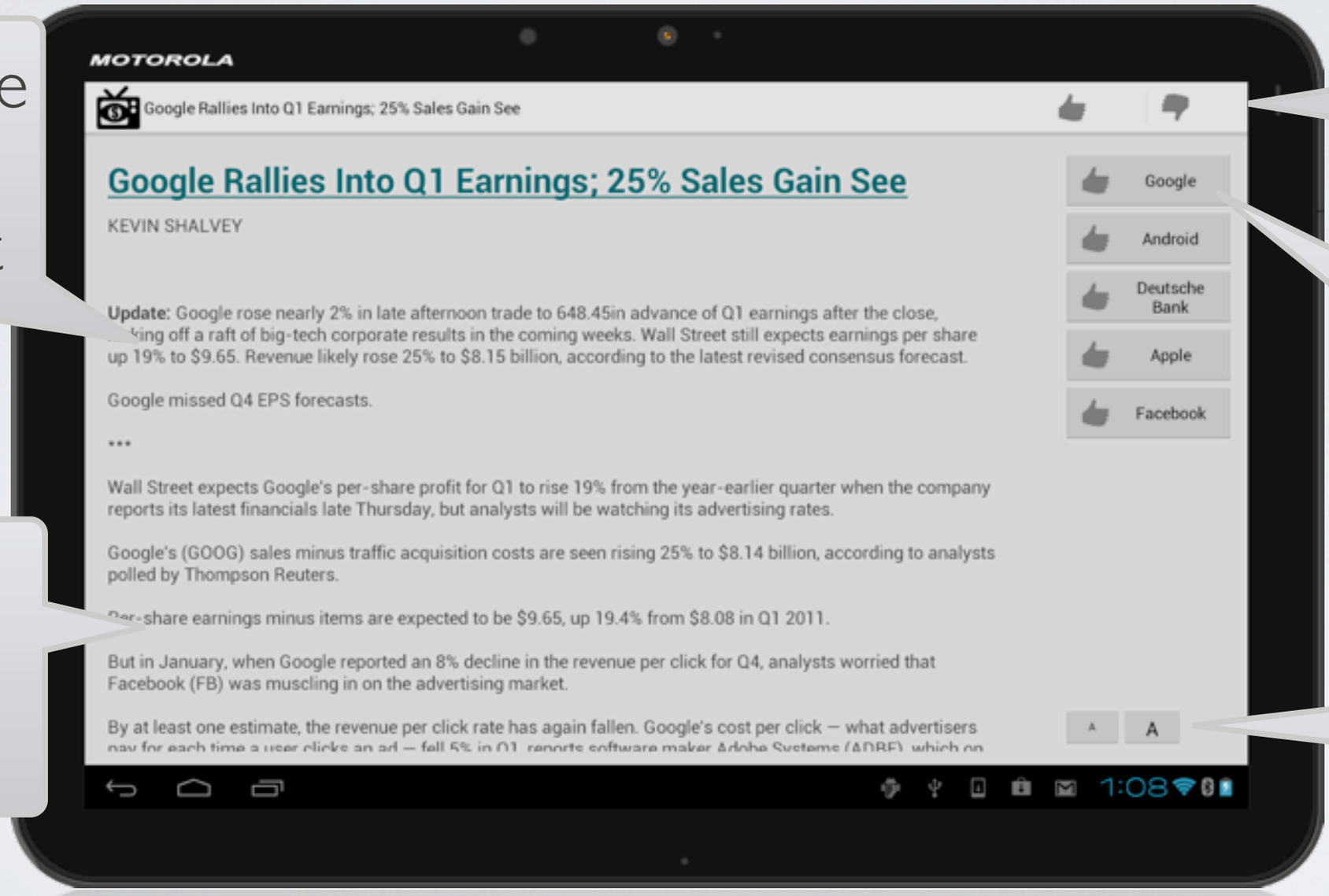
Scrollable article content

Explicit Interest

Individual explicit interest

Implicit Interest

Font size changing



GRAND VALLEY STATE UNIVERSITY

WRITING CODE

- Setting up a skeleton application
- Creating placeholder activities
- Providing asynchronous API calls
- Developing with Xoom tablets

```
float rowSum = row.getWeightSum();
float averageWeight = rowSum / stories.size();
float sumWeights = 0;
for(int i = 0; i < stories.size(); i++) {
    JSONObject story = stories.get(i);
    final String metadata = story.toString();
    View tile = inflater.inflate(R.layout.news_tile, null)
    tile.setOnClickListener(new OnClickListener() {
        public void onClick(View v) {
            Intent intent = new Intent(getActivity(),
                    NewsArticleActivity.class);
            intent.putExtra("metadata", metadata);
            getActivity().startActivity(intent);
        }
    });
    float interest = (float) story.optDouble("interestLeve
    float interestVariance = interest - averageInterest;
    float weight = (1 - interestMultiplier) * averageWeigh
    sumWeights += weight;
    tile.setTag(weight);
    interestViews.add(tile);
    populateTile(tile, story);
    row.addView(tile);
}
```

CHALLENGES

- Constantly changing design
- Working with an evolving API
- Determining the best techniques for learning user preferences

POSSIBLE EXPANSIONS

- Integrating with TV program identification
- More learning techniques, less user interface design

GRAND VALLEY STATE UNIVERSITY

THANK YOU!

Grand Valley State University