



# AndRadar: Fast Discovery of Android Applications in Alternative Markets

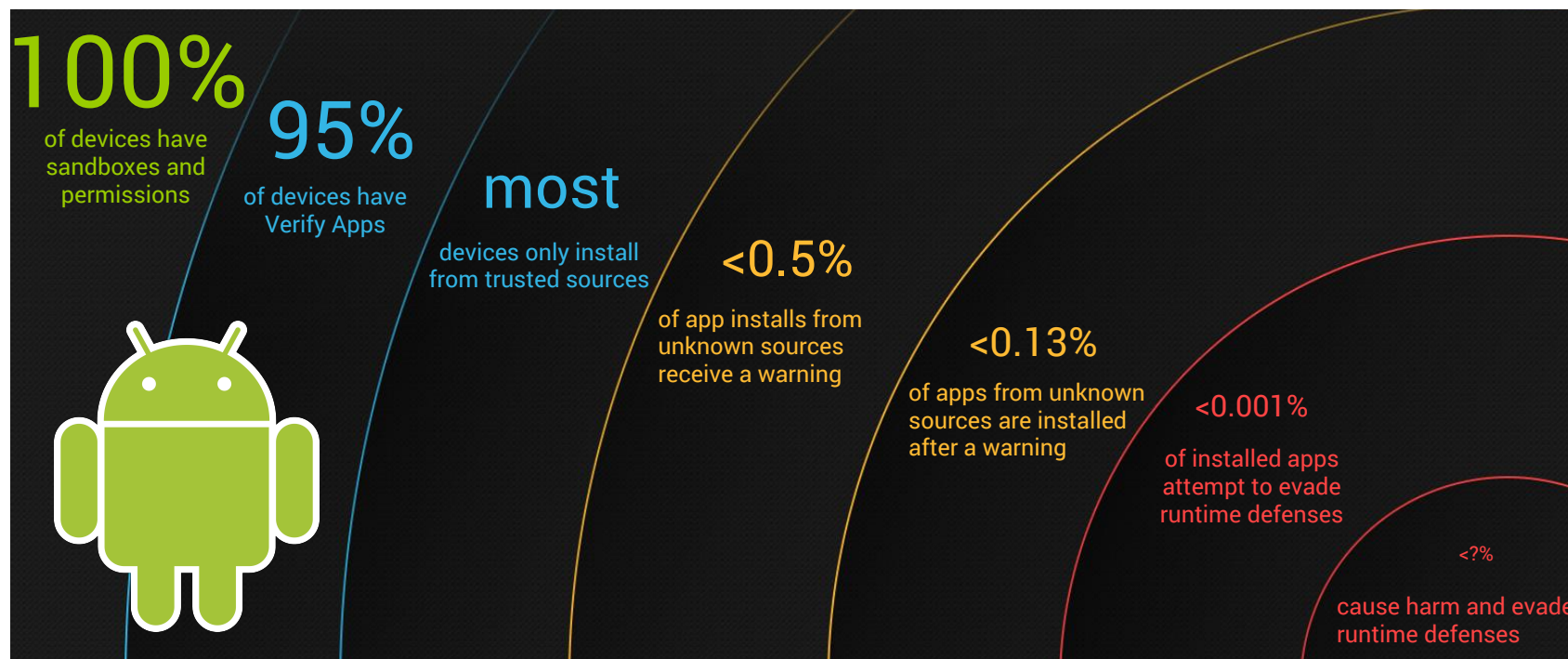


**Martina Lindorfer**, Stamatis Volanis, Alessandro Sisto  
Matthias Neugschwandtner, Elias Athanasopoulos, Federico Maggi  
Christian Platzer, Sotiris Ioannidis, Stefano Zanero

Vienna University of Technology  
Foundation for Research & Technology – Hellas  
Politecnico di Milano

---

# Low infection rates?



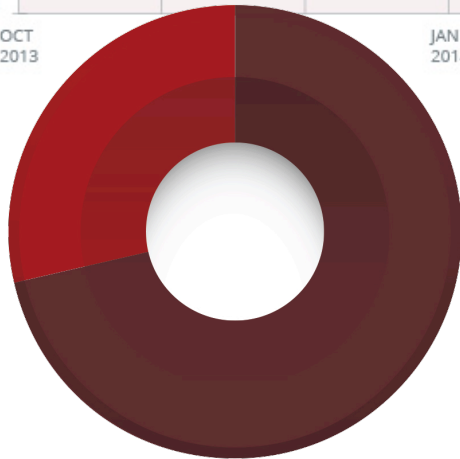
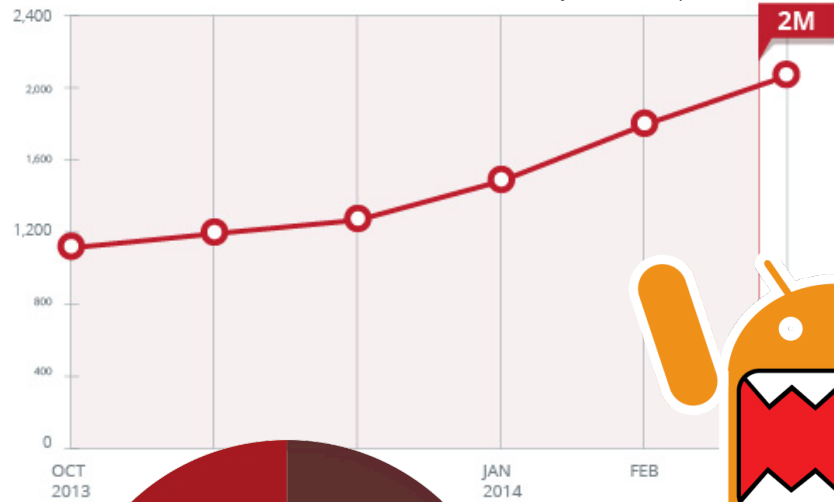
Google: Android Security From The Ground Up (VirusBulletin 2013)

- The Core of the Matter (NDSS13) 0.0009%
- The Company You Keep (WWW14) 0.28%

# AV vendors paint a different picture...



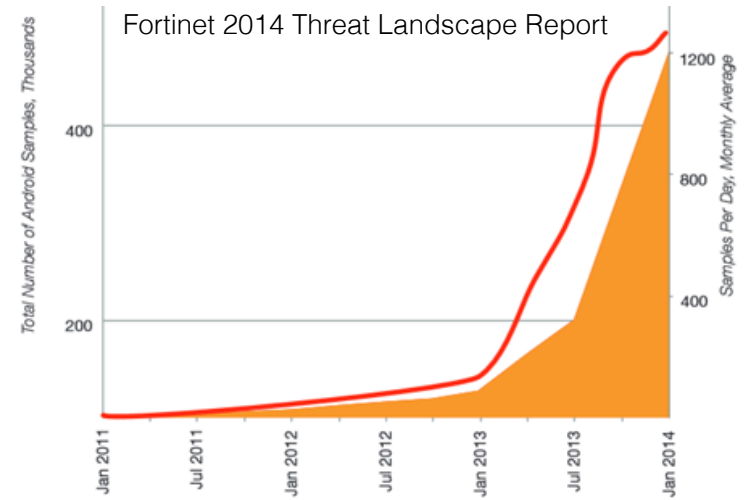
TrendMicro TrendLabs 1Q 2014 Security Roundup



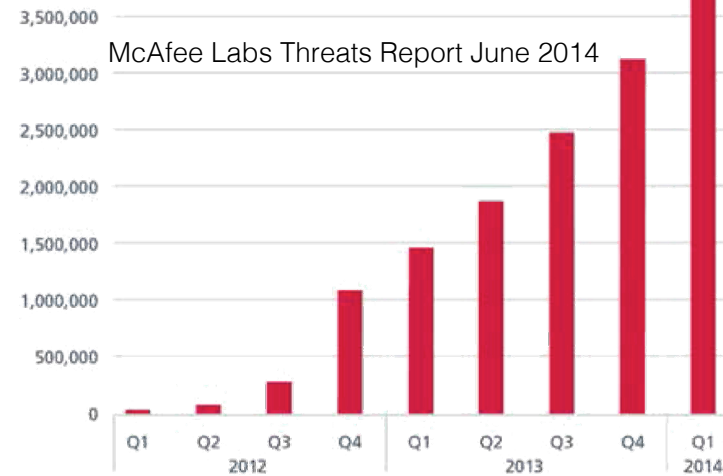
- Mobile malware 72%
- High-risk apps 28%



Fortinet 2014 Threat Landscape Report



McAfee Labs Threats Report June 2014



# Motivation



- How are malicious apps distributed?
  - Official Google Play Store
  - Torrents, One-Click Hosters
  - Websites, Blogs, ...
  - **Alternative App Markets**



- How wide-spread are malicious apps, how often are they downloaded?
- Do alternative markets employ security measures?
- Collect metadata for malware analysis
  - Andrubis, AndroTotal

# Market Metadata: Google Play



The screenshot shows the Google Play Store page for the app "Farting Panda" by Bell Pepper Edutainment. The page includes a search bar, a navigation menu with options like "Apps", "My apps", "Shop", "Games", and "Editors' Choice", and a main content area. The main content area features the app's icon (a panda farting), the app title "Farting Panda", the developer name "Bell Pepper Edutainment - 11 March 2014", the genre "Arcade", and buttons for "Install" and "Add to wishlist". Below this, there are four preview images: a panda's face, a "Start" screen, a "Get Ready" screen, and a "Game Over" screen. The "Description" section follows, containing a short paragraph and a bulleted list of game instructions.

**Farting Panda**  
Bell Pepper Edutainment - 11 March 2014  
Arcade

Install Add to wishlist

★★★★☆ (1,733) +1663 Recommend this on Google

**Description**

Are you up for the challenge?  
Who needs a bird (even the flappy kind) if you can have a Panda?  
Panda ate a splashy fish for breakfast, a flappy bird for lunch, and now his farts propel him high up in the air!  
You know the drill:

- Tap!
- Fart!
- Avoid the bamboo!
- Get the hiscore! (mine is 15)

# Market Metadata: Google Play



The screenshot shows the Google Play Store page for the app "Farting Panda". The page is viewed in a browser window with the URL <https://play.google.com/store/apps/details?id=air.nl.bellpepper.fartingpanda>. The app has a 3.4 star rating based on 1,733 total reviews. The "Reviews" section shows a bar chart of ratings: 5 stars (732), 4 stars (215), 3 stars (210), 2 stars (171), and 1 star (405). Two reviews are visible: one by Jaxon Daoust (5 stars) and one by keishajo1973 (5 stars). The "What's New" section lists updates such as "With music!", "With high quality graphics!", and "More than 10 farting sounds!". The "Additional information" section provides details like "Updated" (11 March 2014), "Size" (11M), "Installs" (100,000 - 500,000), "Current Version" (1.3.5), and "Requires Android" (2.2 and up). The "Similar" section at the bottom shows five other app icons.

Updated	Size	Installs	Current Version	Requires Android
11 March 2014	11M	100,000 - 500,000	1.3.5	2.2 and up

Content Rating	Contact Developer	Permissions	Report
Everyone	<a href="#">Visit Developer's Website</a> <a href="#">Email Developer</a>	<a href="#">View details</a>	<a href="#">Flag as inappropriate</a>

# Outline



- **Market Characterization**
- Android Market Radar (AndRadar)
- Evaluation and Case Study
- Future Work and Conclusion

# Market Characterization



- Alternative markets are popular because of ...
  - Country gaps (e.g. no paid apps in Google Play China)
  - Promotion
  - Specific needs and specialization
- Preliminary study on 8 alternative marketplaces
  - Crawled them entirely between July and Nov 2013
  - Downloaded 318,515 apps



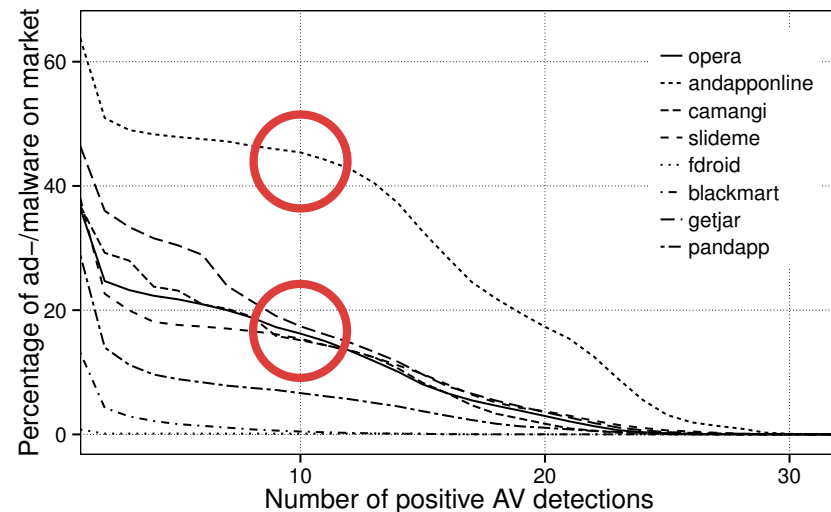
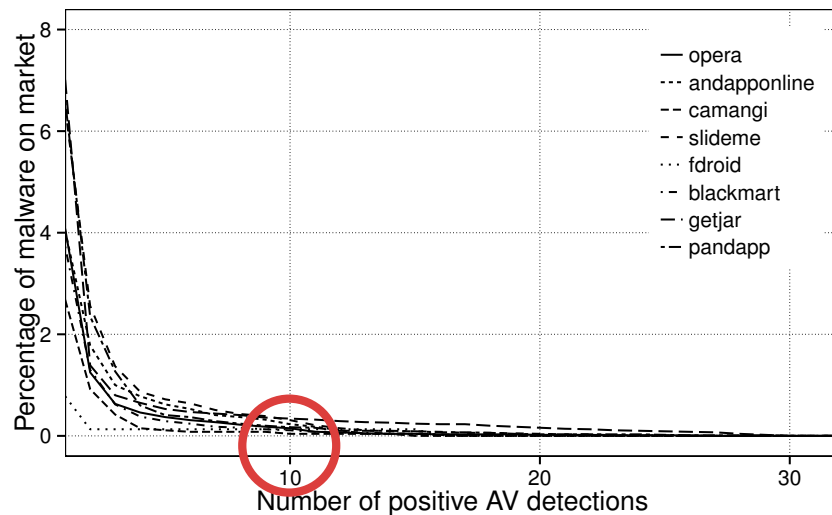


# (1) Distribution of Unwanted Apps



## Do markets distribute known, unwanted apps?

- Yes, they do!
- 5-8% malicious apps in whole dataset  
10+ AV detections, excluding adware
- Some markets specialize in adware/"madware"

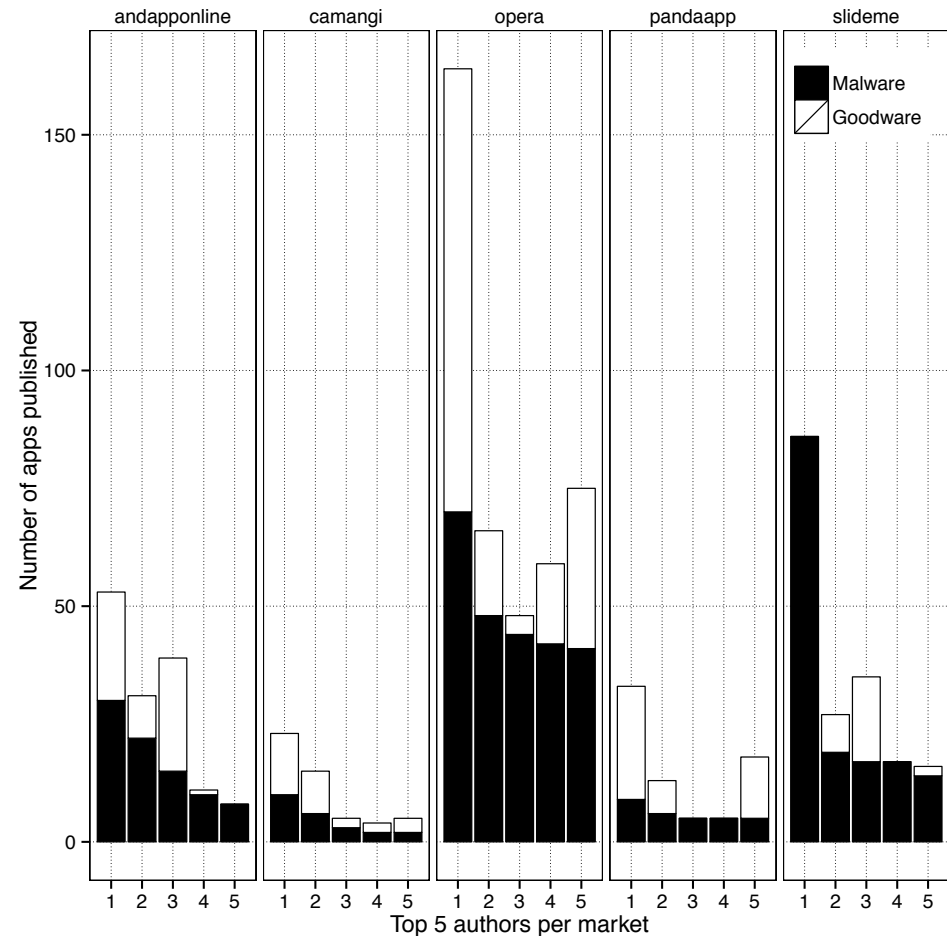


## (2) Publication of malicious apps



### Do markets allow the publication of malicious apps?

- Yes, they do!
- Ranking based on number of published apps
- Well visible and known to market operators
- Top authors publish both benign and malicious apps

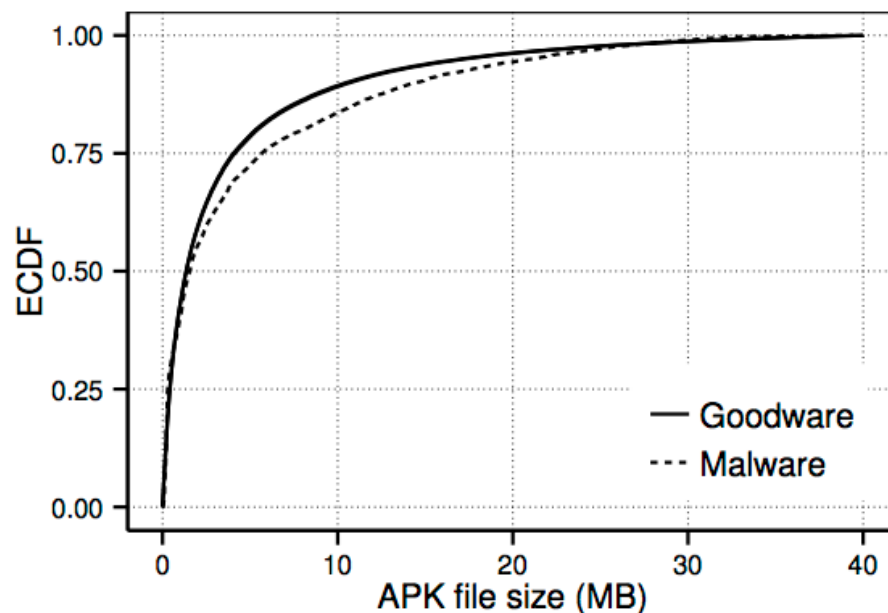


## (3) Distinctive metadata



### Do malicious apps have distinctive metadata?

- Yes, they do!
- Malicious apps slightly larger than goodware  
→ Additional malicious code in repackaged apps
- Malicious apps are downloaded more often  
→ Inflation of ranking with app rank boosting services

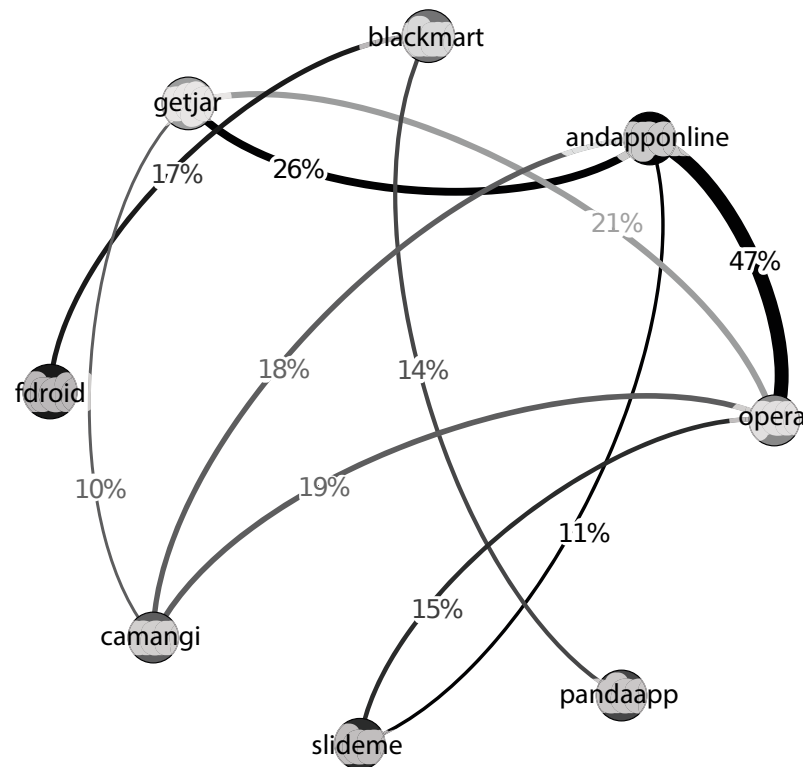


# (4) Market Overlap

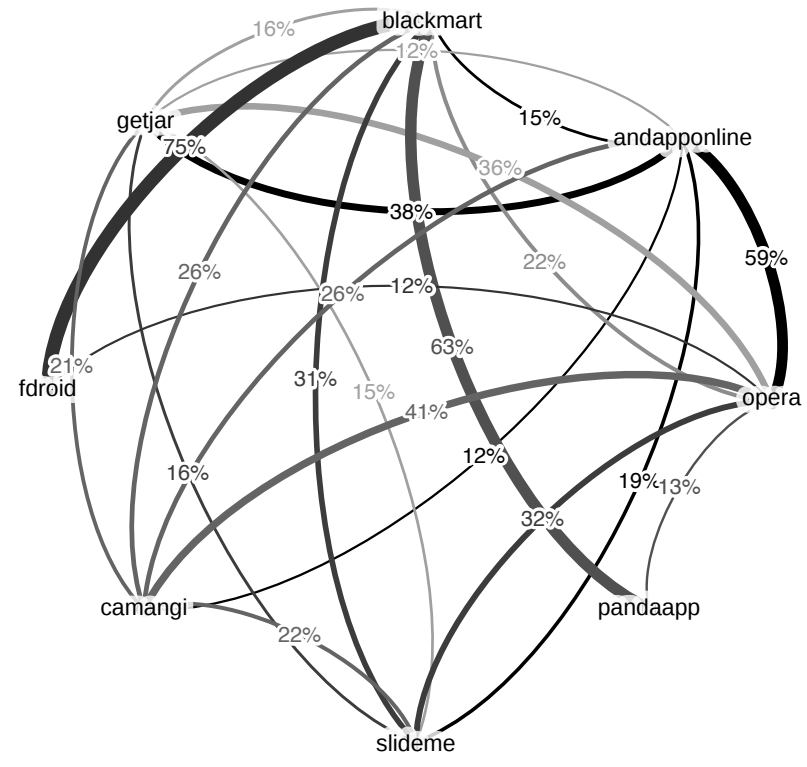


How are markets related to each other?

- Markets share up to 47% MD5s, 75% package names



Intersection by MD5



Intersection by package name

# Outline



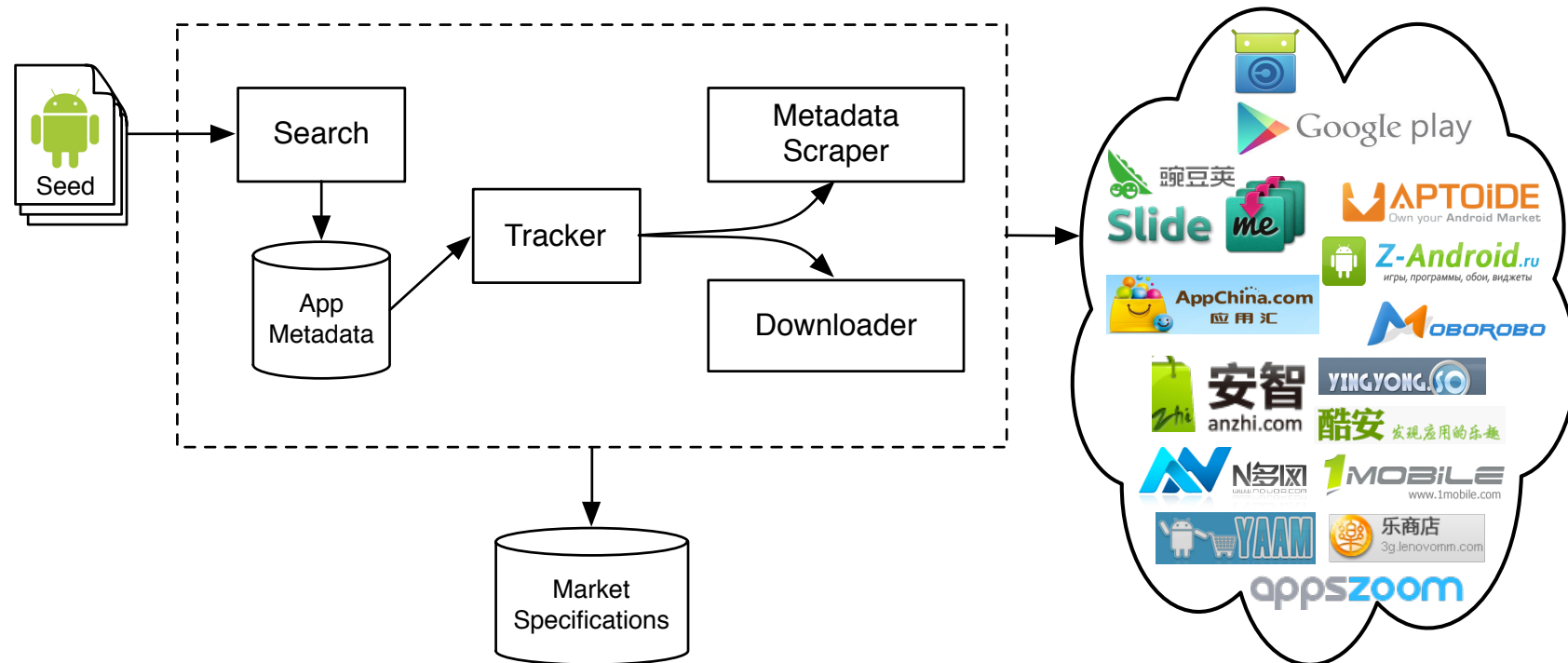
- Market Characterization
- **Android Market Radar (AndRadar)**
- Evaluation and Case Study
- Future Work and Conclusion

# AndRadar Design Goals



- Discover apps in markets in real-time
- Distribution of apps across markets
- Increasing space and time requirements
- Meta information dynamic → regular crawling of apps
  
- Crawling of complete markets becomes infeasible
  - Plethora of alternative markets
    - ~ 196 in October 2011 (Vidas et al. CODASPY13)
    - ~ 500 in Juniper Threats Report March 2012/2013
    - ~ 89 in our market study in June 2013

# AndRadar Architecture







# App Discover: AppChina



锅舞者下载 锅舞者安卓版下载 锅舞者 1.0.1手机版免费下载 - AppChina应用汇

www.appchina.com/app/com.Beltheva.DanceDance/

AppChina.com 应用汇

搜索 免费注册 | 登录账号

首页 安卓软件 安卓游戏 排行榜 开发者 应用邦 论坛

应用汇安卓市场 > 安卓游戏 > 益智游戏 > 锅舞者

**锅舞者** ❤ 1人喜欢

点击查看二维码 **免费下载**

12.5 MB 1000-5000次 益智游戏 1.0.1 有(普通广告) 无病毒 Android 2.2 以上 [收起详情](#)

下载大小: 12.5 MB 最新版本: 1.0.1 “锅舞者”的更新信息:  
总下载量: 1000-5000次 广告检测: 有(普通广告) 2012/10/26(v1.0.1) いくつかの不具合修正2012/10/25(v1.0.0) 新規リリース\*要求されるネットワーク系の権限は広告表示のために使用しております。ご了承ください。  
内容类型: 益智游戏 病毒扫描: 360安全卫士 腾讯手机管家 安全管家

更新时间: 2013-03-04

“锅舞者”的介绍:

嗨,我的名字是熊猫舞者! 今天是舞蹈比赛, 一年一次。  
我是去年的冠军,但是我不太擅长跳舞。我真的需要你的帮助,成为赢家!  
这个游戏的规则太简单。按下按钮(步骤、翻转、跳跃和姿势)以相同的顺序按下按钮

“锅舞者”的评论

应用汇“微信公众账号”: [老号就用来自钓鱼吧](#) 版本: 1.0.1 2014-03-02  
应用汇用户 用\_SCH-J939D 说:

# App Discovery: Appszoom

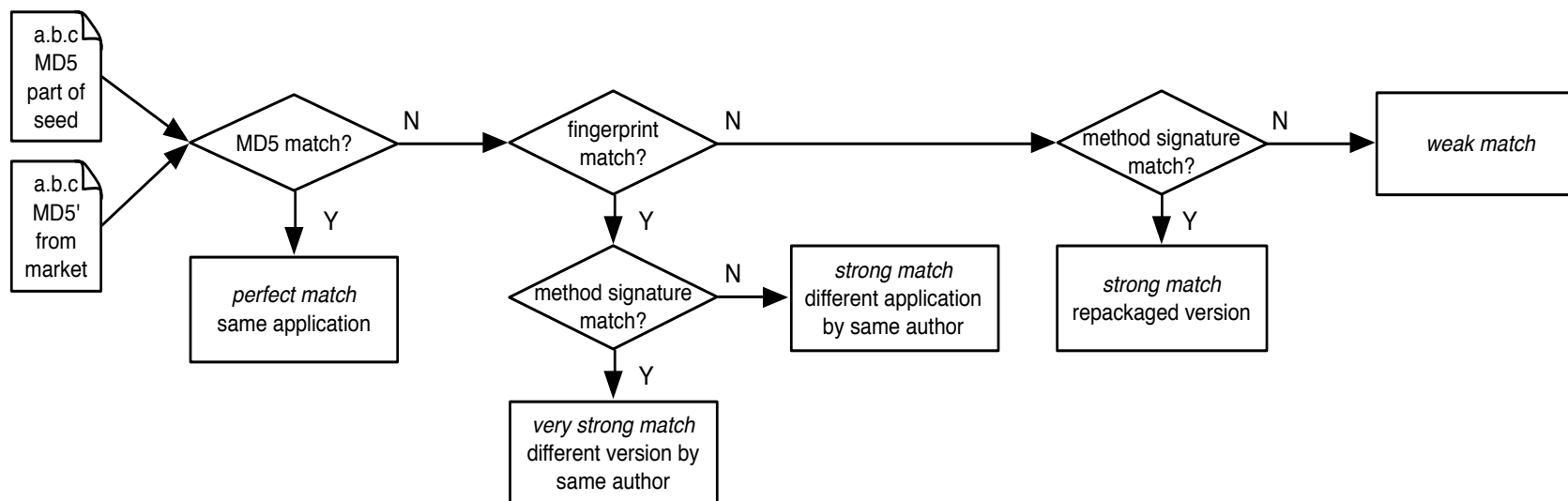


A screenshot of the AppsZoom website showing the details for the 'Rolling Panda' app. The page is viewed in a browser window with the URL 'www.appszoom.com/android\_games/family/rolling-panda\_bqzkh\_download.html'. The app is listed as 'FREE' with a 4-star rating and 2,097 reviews. It is developed by 'KidsFun' and has 500,000 - 1,000,000 downloads. The page includes sections for 'Pros' (Fun, entertaining; Colorful, addictive) and 'Cons' (graphics' problem sometimes). There are three download options: 'DOWNLOAD BY EMAIL', 'QR CODE', and 'DIRECT DOWNLOAD APK FILE'. The 'Permissions' section is highlighted with a red box, showing the package name 'Package com.kidsfun.jump.panda' and a list of permissions: 'Know what access (wifi, 3G...) you have at every moment.', 'Send and receive internet info.', 'android.permission.READ\_EXTERNAL\_STORAGE', 'Read phone state. Used to know whether you're in a call or not.', 'Use the vibrator.', and 'Write whatever to your SD card.'

# App Matching



- Match downloaded app to malicious app in seed
- Different levels of confidence based on
  - Package name
  - MD5 hash
  - Fingerprint of developer's certificate
  - Method signatures



# Collected Metadata



- Continuous monitoring of discovered apps
- Harvest meta information from market listing
  - Upload date
  - Description
  - Screenshots
  - Number of downloads
  - User ratings
  - Reviews
  - Other apps by the same author
  - Delete date

# Outline

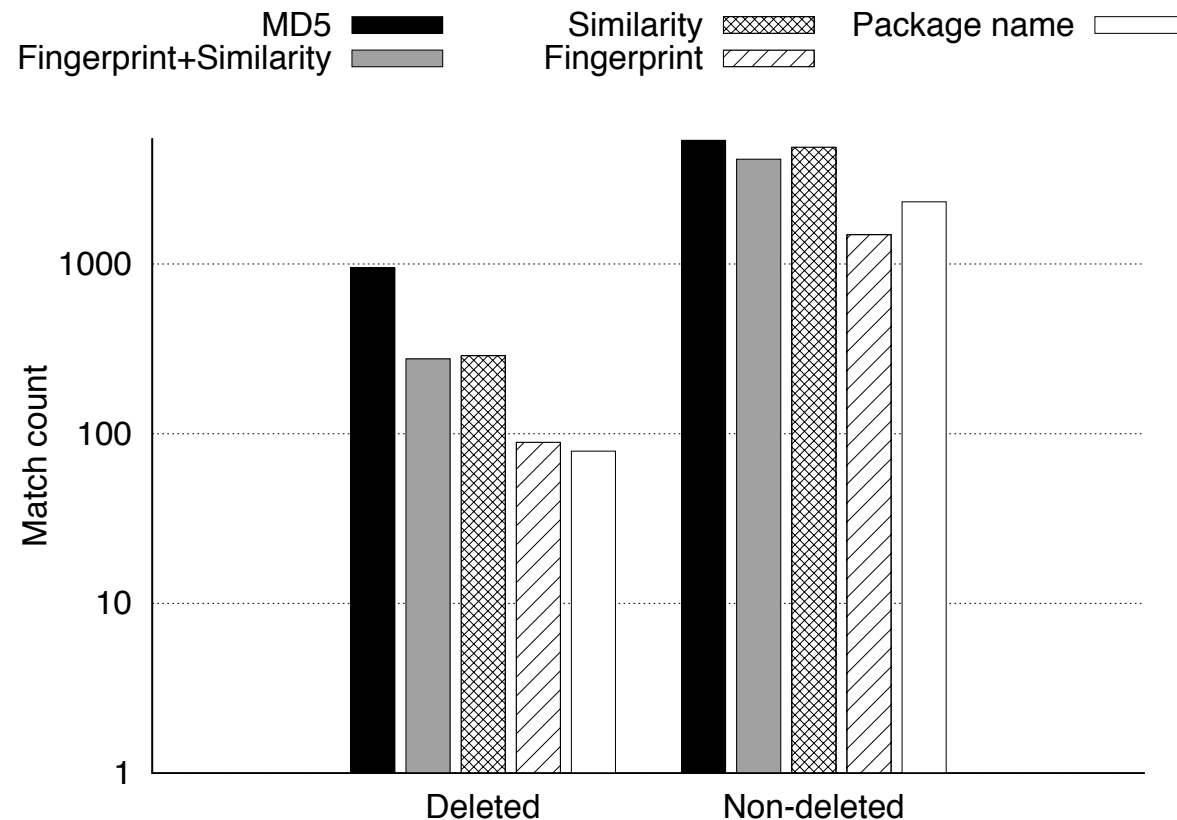


- Market Characterization
- Android Market Radar (AndRadar)
- **Evaluation and Case Study**
- Future Work and Conclusion

# Overall performance



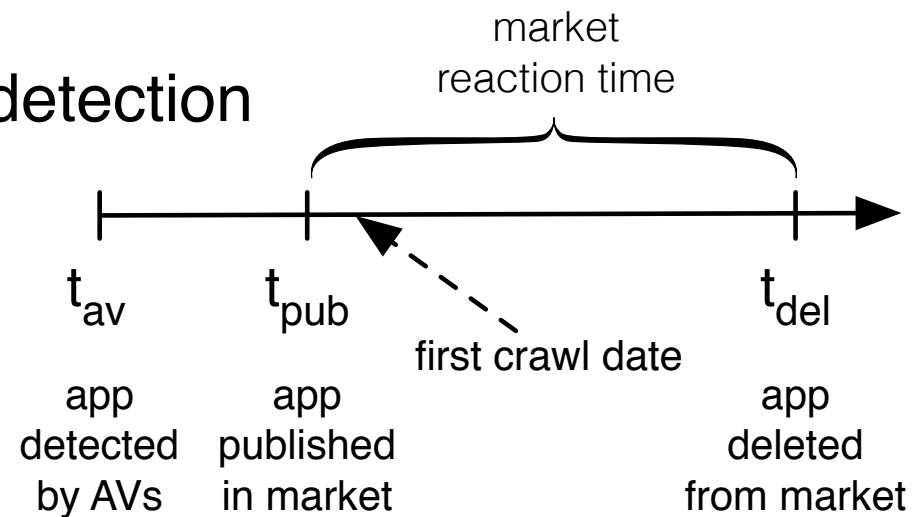
- Track tens of thousands of apps per market/day
- Tracked 20,000 apps/1,500 app deletions



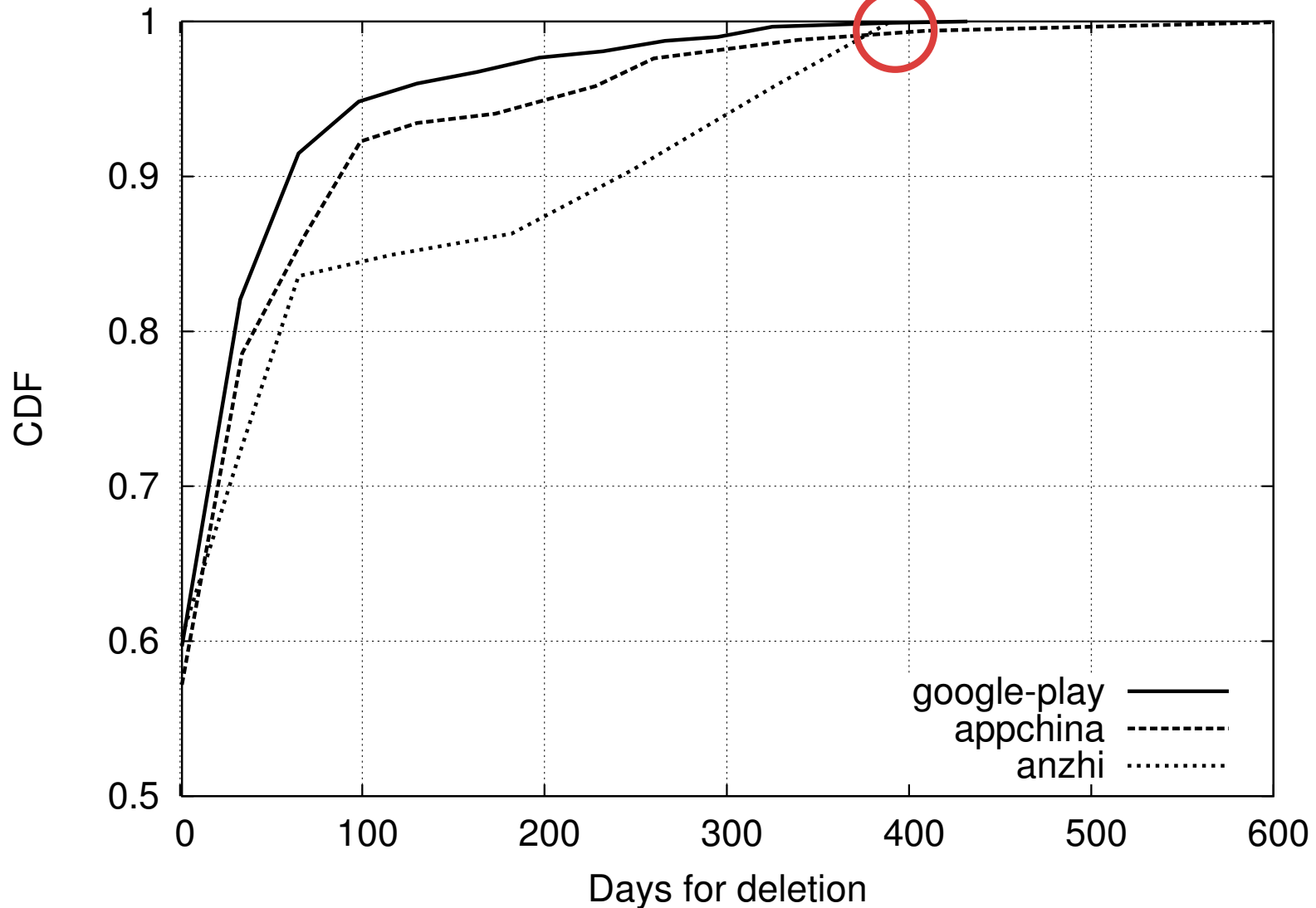
# Application Lifecycles



- **Normal Lifecycle:**  
Market deletes app after it is detected by AVs
- **Market Self-Defense:**  
Market deletes app before it is detected by AVs
- **Malware Hopping:**  
App is republished after detection  
“Failover” strategy

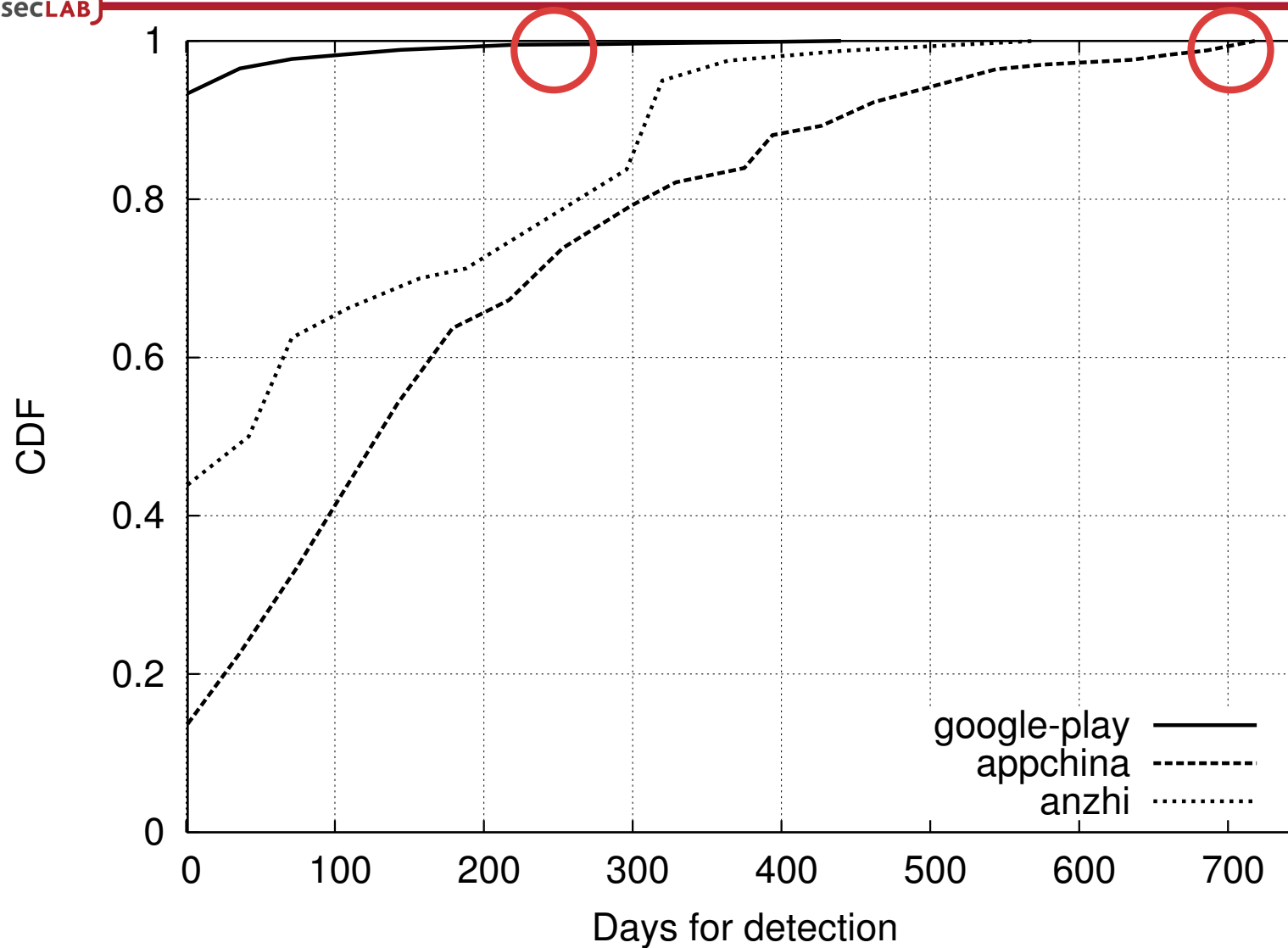


# Market Reaction Time





# Community Reaction Time



# Outline



- Market Characterization
- Android Market Radar (AndRadar)
- Evaluation and Case Study
- **Future Work and Conclusion**

# Future Work



- Automated notification system for markets
- Extend app discovery in markets based on
  - Application name
  - Image characteristics (icon, screenshots)
  - Description of functionality
- Versioning of malicious apps
- Identify fraud in markets (“App rank boosting”)
  - Inflated download numbers
  - Fake ratings and reviews

# Conclusion



- In-depth measurement on 8 alternative markets
- AndRadar to discover malicious apps in real-time
- Tracking of app distribution across markets
- Collect metadata about apps
  - Branding
  - Updates
  - Download numbers
  - Ratings & reviews
- Expose publishing patterns of malware authors
  - “Failover” strategies to migrate between markets



# Questions?

apking@iseclab.org  
mlindorfer@iseclab.org

<http://www.iseclab.org/people/mlindorfer>

# Malicious App Seed



- Feed of known malware or unwanted apps
- Continuous stream of apps from ...
  - Manually vetted malware repository (VirusShare)
  - Submission feed from VirusTotal based on # of AV signatures
  - Submissions to Andrubis based on dynamic analysis result
- Seed format: APK files  
<Package name, Certificate, Method signatures, MD5>

# 1 Mobile



The screenshot shows the 1Mobile Market website interface. At the top, there is a navigation bar with links for Home, Downloads, Apps, Games, Videos, Applists, Developer, and 1Mobile Market. The main content area is titled "1Mobile Market 4.0.2.2" and includes a "Download" button, a description of the update, and several screenshots of the app's interface. A sidebar on the left lists various categories of apps, and a right sidebar features a "RELATED ANDROID APPS" section with a list of recommended applications.

**1Mobile Market 4.0.2.2**

**1Mobile Market 4.0.2.2's Description**

ChangeLog for 4.0.2.2

- 1.Redesigned User Interface, easier to use
- 2.Provide the most extraordinary using experience
- 3.Support personalized recommendations
- 4.Improve performance and stability

- Over 500,000 free apps;
- Direct downloads to your phone or computer;
- All safe, all secure, virus and malware clean;
- Stable, high speed downloads supported by 80,000 servers...

**1Mobile Market 4.0.2.2's Screenshots**

**Download 1Mobile Market 4.0.2.2**

**Install** OR

**RELATED ANDROID APPS**

**Top News & Magazines Apps**

1. Emergency AUS
2. CNN Breaking US & W...
3. NYTimes - Breaking Ne...
4. UK European Football ...
5. Major League Baseball
6. Algeria Press
7. ttkf4
8. OI News Reader
9. my NPR
10. NPR News

# Anzhi



Dr. Panda 餐厅\_策略经营\_游戏\_安卓安智市场

www.anzhi.com/soft\_1389959.html

登录 注册 新浪微博 腾讯微博

安智 anzhi.com 上安智，下软件！

搜索应用/游戏

首页 安卓应用 安卓游戏 专题 开发者 安智论坛 电信精品

游戏 > 策略经营

**Dr. Panda 餐厅 (1.2)**

★★★★★ 安全认证 有广告

软件分类: 策略经营 下载: 1000+

时间: 2014年02月28日 大小: 44.6M

系统支持: Android 4.0及以上 资费: 免费

作者: Skai

安装到手机 相同作者

二维码扫描下载 一键安装

下载到电脑 云推送到手机

简介:

《Dr. Panda餐厅》重新开业啦！这次一切由你做主！制作你梦想中的美味比萨、让人赞不绝口的通心粉或是辣到让人喷火的香辣汤。甜还是咸？辣还是苦？你说了算！在Dr. Panda餐厅2中，孩子们将掌管厨房里的一切！未来的大厨们将自由地选择食材，选择如何制作料理！切，拌，煎，炖多达20种食材，制作完美

展开

软件截图:



联系我们

用户还下载了

Dr. Pa...	1000+
欢乐餐厅	4000+
插乐插	70万+
熊猫博士汽车...	3000+
我的小小餐厅	3000+
多纳 宝贝餐...	4000+
蛋糕魔秀桌面...	400+
熊猫博士的宝...	500+
熊猫幼儿园	2万+
宝贝学购物	2000+



# Aptoide

A screenshot of the Aptoide website showing search results for the keyword "panda". The browser address bar shows "www.aptoide.com/search/view?search=panda". The website header includes the Aptoide logo, navigation links (HOME, APPS, STORES, PARTNERS, PUBLISHERS), and a search bar. The main content area displays a grid of app cards, each with an icon, title, download count, and date. A "Found 559 APPS" badge is visible in the top right of the results section. A vertical scrollbar is on the right side of the page.

Search "panda" | Aptoide - Android Apps Store

www.aptoide.com/search/view?search=panda

English New user Login

HOME APPS STORES PARTNERS PUBLISHERS

SEARCH

SEARCH RESULTS FOR APP: PANDA Found 559 APPS

App Name	Downloads	Time Ago	Features
Panda Run	64	3 months ago	Free
Dr. Panda's Restaurant - ...	15,380	8 months ago	Free, + versions, + stores
Talking Lily Panda Free	2,586	2 years ago	Free, + stores
Dr. Panda's Daycare - Free	4,373	8 months ago	Free, + versions, + stores
Dr. Panda's Veggie Garden	4,190	7 months ago	Free, + versions, + stores
Dr. Panda's Hospital - Free	4,161	8 months ago	Free, + versions, + stores
Dr. Panda's Veggie Garde...	1,647	8 months ago	Free, + versions, + stores
Pandas vs Ninjas Christmas	536	2 years ago	Free, + stores
foodpanda Order Food D...	374	2 weeks ago	+ versions, + stores
Talking Panda	135	1 year ago	
Dr. Panda's Handyman - ...	103	1 month ago	Free, + stores
Panda Super Run	13	3 months ago	
Sleepy Panda Wallpaper	10	1 month ago	+ versions, + stores
Keyboard Cute Panda	7	1 month ago	+ versions
Flying Panda	0	3 days ago	+ stores
Dr Panda's Handyman	7,328	12 months ago	+ stores
Dr. Panda's Restaurant	6,224	5 months ago	+ versions, + stores
Dr. Panda's Beauty Salon	5,596	7 months ago	+ versions, + stores
Dr. Panda's Home	1,060	1 month ago	+ versions, + stores
Dr. Panda's Airport	12,245	7 months ago	+ versions, + stores
Dr. Panda's Supermarket	11,379	8 months ago	+ versions, + stores
Dr. Panda's Bus Driver			
Market पंडा			
91PandaHome			

# CoolAPK



浏览器地址: coolapk.com/game/com.ximad.pvn

酷安 首页 应用 游戏 发现频道 应用集 酷市场 我叫MT 登录 注册

### 愤怒的熊猫:Pandas vs Ninjas Premium 1.5

5人关注, 8000+次下载, 20个评论, 4个权限, 英文软件, 8.09 MB, 支持1.6及更高版本, 2011-08-16更新

[下载](#) [+关注](#) [云安装到手机](#) [器二维码](#) [+加入应用集](#) [更多](#)

酷安点评: 如果玩腻了愤怒的小鸟, 这款愤怒的熊猫 Pandas vs Ninjas确实可以作为一款替代品, 而且对于rom和屏幕的支持比小鸟更好, 不过在市场的评价还是明显不如小鸟, 正宗的就是正宗, 这款熊猫还是可以把玩一下的, 市场售价0.99美金

应用评分	应用详情	权限(4)
4	★★★★ 0%	
★★★★★	★★★★★ 100%	
★★★★★	★★★★★ 0%	
★★★★★	★★★★★ 0%	
★★★★★	★★★★★ 0%	
共2个评分	★★★★★ 0%	

我的评分(未评分)

★ ★ ★ ★ ★

分类标签: 休闲游戏 熊猫 小鸟

#### 应用简介 ...

愤怒的熊猫Pandas vs Ninjas与愤怒的小鸟玩法一样, 支持1.5固件以上320x480分辨率, 音乐和画面都具中国风格。

**v1.5更新内容:**

# Fixed bug (white screen in select scenario on 1.5 version)

[版本历史 ...](#)

#### 评论 (共20条评论) ...

表情 图片 [提交评论](#)

**sunyeshigou** 2011-08-14 版本: 1.3  
英文不是叫熊猫与忍者吗 怎么翻译过来也那么山寨  
👍 4

共4条评论

- sunyeshigou** 回复**非直男**: 人之贱则无敌! 你赢了。(2012-12-28)
- 非直男** 回复**sunyeshigou**: 还好有你妈咪垫底。(2012-12-21)
- sunyeshigou** 回复**非直男**: 你不都撞死了吗, 咋还发炎呢。(2012-12-19)

# F-Droid

A screenshot of a web browser displaying the F-Droid website. The browser's address bar shows the URL "https://f-droid.org/repository/browse/?fdid=de.onyxbits.pocketbandit". The page features the F-Droid logo at the top, a navigation menu with links for "Browse", "Forum", "Wiki", "Issues", "Contribute", "About", and "Login", and a main content area for the "Pocket Bandit" app. The app page includes a description, license information (Apache2), website, issue tracker, source code, and donate links. A "Download F-Droid" button is visible. On the right side, there are sections for "Donate" and "Latest Apps".

F-Droid

Browser: [Browse](#) [Forum](#) [Wiki](#) [Issues](#) [Contribute](#) [About](#) [Login](#)

## Pocket Bandit

Slot-machine game

A comic style slot machine game. The game is modelled after the classic, three reel, ten stops slot machines, made popular by Mills Novelty. Unlike its mechanical cousins, Pocket Bandit is not entirely luck based, but also offers elements of skill and strategy game play. Pull the lever to spin the reels and push it up to stop them spinning.

License: [Apache2](#)

Website: <http://www.onyxbits.de/pocketbandit>  
Issue Tracker: <https://github.com/onyxbits/pocketbandit/issues>  
Source Code: <https://github.com/onyxbits/pocketbandit>  
Donate: <http://www.onyxbits.de/pocketbandit>

For full details and additional technical information, see [this application's page](#) on the F-Droid wiki.

## Packages

Although APK downloads are available below to give you the choice, you should be aware that by installing that way you will not receive update notifications, and it's a less secure way to download. We recommend that you install the F-Droid client and use that.

[Download F-Droid](#)

**Version 1.1** - Added on 2013-03-09

This version requires Android 1.6 or newer.

This version uses native code and will only run on: armeabi armeabi-v7a

## Donate

F-Droid is powered by your donations.

[Donate](#)

[Flattr this!](#)

[bitcoin](#)  
15u8aAPK4jJ5N8wpWJ5gutAyyeHtKX5i18

## Latest Apps

- [RMLL/LSM](#) (GPLv3)
- [GreenAddress.It](#) (LGPLv2.1)
- [WikipOff](#) (GPLv3)
- [Moon Phase](#) (GPLv3)
- [Quasseldroid](#) (GPLv3)
- [ChessWatch](#) (GPLv2)
- [Lightning](#) (MPLv2)
- [Calculate!](#) (GPLv3)

# Lenovo



The screenshot shows the Lenovo App Store website for the 'Panda DIY' application. The browser address bar displays 'app.lenovo.com/app/13825097.html'. The page features a blue header with the '乐商店' (Lenovo App Store) logo and a search bar. Below the header is a navigation menu with options like '首页', '安卓软件', '安卓游戏', '排行榜', and '微博热荐'. A prominent green banner for '乐助手' (Lenovo Assistant) is visible, with the text '用电脑深度管理手机可以很简单!' and a '立即下载' (Download Now) button.

The main content area is titled 'Panda DIY' and includes a panda mascot icon. It provides the following details:

- Buttons: 乐助手一键安装, 发送到手机, 下载到电脑
- Rating: 4 stars (★★★★)
- Downloads: 大于5千次安装
- Size: 3.26MB
- System: 适用系统: android 2.1以上
- Update: 更新时间: 2014-02-21
- Version: 版本: 1.2.1
- Developer: 开发者: cathy123cathy12
- QR code: 试试使用二维码下载吧! 如何使用二维码?

Below the app details, there are two tabs: '详细信息' (Detailed Information) and '用户评论' (User Reviews). The '用户评论' tab is active, showing a screenshot of a mobile chat conversation. The chat shows a user named 'Angela' asking 'Hey, what do u want for your phone?' and the app's panda mascot replying 'Hmm, I want a new mobile phone!'.

On the right side of the page, there are sections for '乐商店手机版' (Lenovo App Store Mobile), '乐商店平板版' (Lenovo App Store Tablet), and '乐助手-乐商店PC版' (Lenovo Assistant - Lenovo App Store PC). A '相关推荐' (Related Recommendations) section lists various other apps and services like Youku, iQIYI, Baidu Video, etc.

# Moborobo



A screenshot of a web browser displaying the Moborobo website. The browser's address bar shows the URL "store.moborobo.com/SoftDetail.aspx?f\_id=4297930". The website header includes the Moborobo logo and navigation links for Store, Mobo Products, Help Center, News, and Reviews. Below the header, a breadcrumb trail reads "Home &gt;&gt; Store &gt;&gt; Apps &gt;&gt; Education". The main content area features a large banner for "PhotoWonder" with a woman using a smartphone and text encouraging users to visit the Facebook page. Below the banner, there is a "Categories" sidebar with options like Networking, Tool, Reference, Office, Rich Media, Reading, and Others. The main focus is on the "Let's Spot by BabyBus" app, which includes a panda icon, a "Download" button, a QR code, and technical details: Version: 4.24, Size: 21.04MB, Updated: 2014-03-25, Category: Education, Developer: BabyBus, Requires: Android 1.6+, and Download: 4629. There are also social media sharing options for Like, Tweet, and G+.

# Nduoa



可爱Panda--桌面主题1.0 | 最安全的安卓游戏、安卓软件下载站 | 安卓市场, 安卓软件, 安卓游戏, 安卓版, 安卓...机, 安卓应用, android软件, android游戏, play store, android4.0, android5.0

www.nduoa.com/apk/detail/329114

N多网 安卓游戏 安卓软件 PAD应用 专题推荐 刷机频道 | 机友论坛 | 开发者平台

登录 | 新人注册

大家都在搜: 刀塔传奇

热词: 微信 QQ 腾讯视频 微博 墨迹天气 捕鱼达人 百度糯米 美团 神庙逃亡 妖姬三国

N多网 安卓游戏 安卓软件 专题推荐 刷机频道 机友论坛 赚钱宝 开发者平台

首页 > 软件 > 壁纸主题铃声 > 可爱Panda--桌面主题

**可爱Panda--桌面主题 (1.0)**  
[LV2] 1,069次下载  
★★★★★

安全认证

大小: 6.45 MB  
适用: 2.0及以上  
屏幕: 320x480 360x640 480x800  
作者: 福建博瑞  
更新: 发布于811天前

分享到: 0

**N多市场**  
下载, 更新, 省流量!

手机版下载

PAD版下载

下载到电脑 一键举报

手机助手快速安装:  
一键安装 安全安装 安装到手机

使用二维码下载到手机

详情介绍

可爱Panda[1.0]

# SlideME



A screenshot of a web browser displaying the SlideME website. The browser's address bar shows 'slideme.org/application/guess-painting'. The website has a dark header with the SlideME logo and a search bar. Below the header are navigation tabs for 'Homepage', 'Applications', and 'Community'. The main content area features a card for the 'Guess the Painting v4.26' application by 'babybus', updated on July 8, 2014. The card includes a 'Download' button, social media sharing options, and a QR code. The application's description and features are listed below the image. To the right of the application card is a 'Login' section with input fields for 'Username or e-mail address' and 'Password', and buttons for 'Log in', 'Connect', 'Create new account', and 'Request new password'. Below the login section is a 'Safety first' notice and a 'Search' section with a search bar and a 'Search' button. At the bottom, there is a 'Similar apps' section with recommendations like 'My Babys Sticker Puzzles' and 'My Little Gourmet'.

# Wandoujia



「跑酷熊猫 Running Panda」安卓版免费下载 - 豌豆荚

www.wandoujia.com/apps/com.jundaotech

豌豆荚 世界杯 登录

应用首页 软件分类 游戏分类 排行榜 装机必备 专题 豌豆荚设计奖

应用首页 > 跑酷竞速 > 跑酷熊猫 Running Panda

 跑酷熊猫 Running P... 5.4万人安装 | 5人喜欢 | 21人评论

下载

无病毒 无广告 隐私 官方版

跑酷熊猫 Running Panda 截图



跑酷熊猫 Running Panda 信息

大小 8.96M

分类 跑酷竞速 跑酷 射击冒险 熊猫 道具 奔跑

更新 2012年8月11日

版本 1.2.0

要求 Android 2.2.x 以上

查看权限要求

网站 杭州君道网络科技有限公司

来自 Google Play提供

跑酷熊猫 Running Panda 描述

看我如何飞闪腾挪!

跑酷熊猫是一款生动有趣的奔跑类游戏。您需要操作一只武艺高强的熊猫，利用不同的技能和道具不断的跃过各种障碍，打破自己的最佳成绩。游戏中熊猫拥有二次弹跳，翻越及短暂腾空的能力（需要消耗能量），还能购买道具用物品攻击障碍物。

注意：

更多

跑酷熊猫 Running Panda 更新内容

新版变化

V1.2新增加了成就系统，完成全部6个成就就是具有挑战性的。修复了游戏跳出问题及其他运行bug。

了解更多



# Z-Android



The screenshot shows a web browser window displaying the Z-Android website. The page title is "Panda Run - Скачать на андроид". The URL in the address bar is "z-android.ru/595-panda-run.html". The website has a green and white theme. At the top, there is a search bar and navigation links for "Вход", "Забыли пароль?", and "Регистрация". Below the search bar is a navigation menu with items: Главная, Игры, Программы, Новости, Заказать игру, О проекте, and Контакты. The main content area is titled "Правила" and has a breadcrumb trail: Главная > Игры > Run Игры > Panda Run. On the left, there is a "КАТЕГОРИИ" section with a list of game categories: Аркады, Гонки, Драки, Другие, Карточные, Логические, Настольные, Раннеры, RPG, Симуляторы, Спортивные, Стратегии, Стрелялки, and Эротические. The main content area features a large image of the "Panda Run" game cover. To the right of the image is a table with game details:

Panda Run	
Версия игры: 1.2.1	Версия Android: 2.0 и выше
Размер: 3,7 МБ	Опубликовано: 01.05.2014
Разработчик: sagego	Google Play: <a href="#">Перейти</a>

Below the table, there is a rating section: "Рейтинг: ★★★★★ (голосов: 3)". The main text describes the game, mentioning that it is a platformer where the player controls a panda character in a jungle setting, collecting coins and avoiding obstacles. It also mentions that the game is available on Google Play.

Скриншоты: