PRIVACY MYSTERY · CASE FILE 01

Night Heron

A photo with “location turned off”. How many secrets can it still tell?

Type privacy mystery, solo or 2–4 players together
Time about 45–75 minutes
You need a pen, this file, and a suspicious mind

anoni.net community · anoni.net/mystery/en/
Feedback and case ideas: anoni.net/mystery/en/feedback/
A work of fiction: all people, companies and events are made up. Content licensed CC BY 4.0.

> The last pages are the solution, printed upside down. Don’t turn to the end before you’ve solved the case.

BRIEFING

How to play

You volunteer at the Mistport Privacy Aid. We help people who need to stay anonymous: journalists, whistleblowers, anyone who doesn't want to be found.

Tonight's case

A whistleblower calling themselves **Night Heron** has posted on an anonymous forum: the health-app company BeatBird plans to sell users' sleep, heart-rate and menstrual-cycle data to an insurer. The company has told every employee it will **identify the leaker within 72 hours**.

Night Heron has handed you everything the company can see internally. **Think like the company's investigators** and find the mistakes before they do. Night Heron won't say who they are: "If you can work it out, so can the company."

Your job

Part one: find the leaks What did Night Heron give away without meaning to?

Part two: find Night Heron Using only these files, narrow six suspects to one. Write your answers on the answer sheet at the back.

Rules

- Everything you need is in files 01–10. No internet required.
- Every conclusion needs **evidence**. Hunches don't count, and the company's lawyers won't accept them either.
- Watch out for stale data, coincidences, and people who only look like a match.
- If you're stuck, the hints come after the answer sheet; each one counts against your self-assessment.
- The solution is at the very end, behind a black "stop" page.

Files

01 Night Heron's messages
02 The forum leak post
03 The leaked photo (with close-ups)
04 The photo's metadata
05 Recipients and profiles
06 Attendance
07 BYOD device register
08 Company Slack logs
09 Public social posts
10 Appendix: what's on the web

FILE 01

Night Heron’ s messages

Sent on the night of Wednesday 16 September 2026, through an end-to-end encrypted messenger.

— Safety number verified • messages disappear after 24 hours —

Hello… is this the Mistport Privacy Aid?
21:04

A friend said you help people who need to stay anonymous.
21:05

Yes, I'm the volunteer on duty tonight. Are you OK?
21:06

Honestly? Not really.
21:06

That BeatBird leak on Nameless Square… I posted it.
21:07

Yesterday the company emailed every employee: 'We have engaged security consultants and will identify the leaker within 72 hours.'
21:07

I've barely slept for two days.
21:08

Take a breath. You did this to protect users.
21:09

…Thank you. Nobody's said that to me in a long time.
21:09

Tell me: what did you do to protect yourself when you posted?
21:10

I signed up for the forum with a brand-new email, and I didn't use the company network.
21:10

Before I photographed the memo, I even turned off the camera's 'save location' setting.
21:11

So there's no GPS in the photo. That should keep me hidden, right?
21:12

Turning off GPS was right. But a photo can give away more than location.
21:12

…More than location? Like what?
21:13

Now I'm even more nervous.
21:13

One more thing. That memo went to only six people on 9/11. I’ m one of them.
21:14

Only six? That’ s a very small circle.
21:15

I know. That’ s why I’ m scared.
21:15

Can you tell me who you are? It would help me judge.
21:16

No.
21:16

If you can work it out, so can the company. I want to know how short that road is.
21:17

I've exported everything the company can see internally: the recipient list, staff profiles, the attendance sheet, the phone register, the Slack logs.
21:17

The company's investigators will have all of this too.
21:17

Everyone's PicNote is public, you can look them up yourself. The forum post is still up.
21:17

Night Heron sent heron-export.zip (48 KB) • received

Got it. Give me one night.
21:17

Please.
21:17

Find my mistakes before they do.
21:17

FILE 02

The forum leak post

Posted on the anonymous forum Nameless Square. The forum keeps uploaded attachments as they are.

Nameless Square › Tech jobs › Leaks

[LEAK] BeatBird is selling your sleep and heart-rate data to an insurer

night_heron_0914 · 2026-09-14 22:52 (UTC+8, Taipei time) · 1,284 replies

I work at BeatBird. I hesitated for a long time before writing this, but I realised users have a right to know.

Last Friday, senior management sent an internal memo marked 'confidential': from October, BeatBird will package users' sleep data, resting heart rate and menstrual cycle records, 'de-identified', and hand them to Dingyue Insurance to help price premiums.

The problems:
1. The app's privacy policy has never mentioned this.
2. The so-called 'de-identification' only swaps names for an ID. Birthdays, postcodes and device IDs are all still there. With those three, matching people back is not hard.
3. The company's legal team has known about this deal all along and chose not to update the terms.

The attached photo is of the memo. I turned off location and used a brand-new account.

Taiwan's Personal Data Protection Act is not an ornament. That's all.

```
Attachment: PXL_20260914_144712345.jpg (483 KB)
```

Replies

#1 · 09-14 23:05
This "de-identification" is fake… birthday + postcode is enough to match people back

#2 · 09-14 23:20
OP run, the company will definitely look for you

#3 · 09-15 00:41
Heads up: this forum doesn't touch your photos. What you upload is what everyone gets. If you know, you know.

#4 · 09-15 00:58
Want to see the photo info? Just drop it into ExifPeek, no software needed.

#5 · 09-15 08:12
screenshotted for the record

#6 · 09-15 12:30
BeatBird PR says "all data is de-identified" lmao

FILE 03

The leaked photo

PXL_20260914_144712345.jpg. A photo of the memo on a laptop screen; the memo is in Chinese and you won’ t need to read it. Below, two close-ups the investigator cropped.

Close-up A ・ right of the trackpad

Close-up B ・ bottom left

FILE 04

The photo’s metadata

The investigator downloaded the original attachment and read it with exiftool.

```
$ exiftool PXL_20260914_144712345.jpg

ExifTool Version Number    : 12.76
File Name                  : PXL_20260914_144712345.jpg
File Size                  : 483 KB
File Type                  : JPEG
MIME Type                  : image/jpeg
Make                       : Google
Camera Model Name          : Pixel 7a
Software                   : HDR+ 1.0.641377693
Orientation                : Horizontal (normal)
Date/Time Original         : 2026:09:14 23:47:12
Create Date                : 2026:09:14 23:47:12
Modify Date                : 2026:09:14 23:47:12
Offset Time                : +09:00
Offset Time Original       : +09:00
Offset Time Digitized      : +09:00
F Number                   : 1.9
Exposure Time              : 1/30
ISO                        : 1250
Flash                      : Off, Did not fire
Focal Length               : 5.4 mm
Image Width                : 4080
Image Height               : 3072
Image Size                 : 4080x3072
Megapixels                 : 12.5
(no GPS fields at all)
```

Investigator’s glossary

- **EXIF**: metadata a camera or phone writes into a photo automatically: device, time, settings, sometimes GPS coordinates.
- **Time zone offset (Offset Time)**: the time zone the phone was set to. Phones usually **switch automatically** to local time abroad.
- **Make / Camera Model Name**: the device maker and model.

FILE 05

Recipients and profiles

At 17:30 on Friday 11 September 2026, the Office of the COO sent the memo “Dingyue Insurance health data partnership (phase two)”. The mail system shows only these six recipients and no forwards.

CC — Chang Chia-hao
Data analyst • 32
Builds the reports on users' health data. Outgoing, the most active person on Slack. Runs the data demo at the Tokyo expo.

LY — Lin Ya-ting
Senior backend engineer • 35
Owns the data pipeline; wrote the code that exports the data. Terse, often online late at night.

HC — Hsu Chih-ming
Legal counsel • 29
Reviewed the partnership contract. Precise with words. Questioned the scope of the data deal in a meeting.

HM — Huang Mei-ling
Product manager • 30
Product lead for the BeatBird app and the keynote speaker at the Tokyo expo. Quiet, detail-minded, goes to open-source community events.

WS — Wu Szu-yu
Customer support lead • 41
Answers users' privacy questions every day. The office's big sister, always reminding everyone about paperwork.

CP — Chen Po-han
Sales manager • 38
The key person behind the Dingyue Insurance deal, under heavy sales pressure. Mixes English into everything.

In privacy, this is called an **anonymity set**: how many people you can’t be told apart from. Night Heron’s starts at **six**, and every leak makes it smaller.

FILE 06

Attendance · 2026/09/12–09/16

Exported from the HR system.

Name	Type	Dates	Location	Note
Chang Chia-hao	Business trip	09/13–09/16	Tokyo (Japan)	Asia Digital Health Expo · data demo
Lin Ya-ting	Remote work	09/14–09/16	Home (Taipei)	
Hsu Chih-ming	Annual leave	09/12–09/15	Seoul (Korea)	Personal trip
Huang Mei-ling	Business trip	09/13–09/16	Tokyo (Japan)	Asia Digital Health Expo · keynote
Wu Szu-yu	In office	—	Taipei office	
Chen Po-han	Business trip	09/13–09/16	Singapore	Client visits

※ The Tokyo team stays at Hotel Sakura Shinjuku. 09/14: expo 09:00–18:00, client dinner 19:00–21:30 (Chang Chia-hao and Huang Mei-ling), free afterwards.

FILE 07

BYOD device register

Staff who read work email on a personal phone must register it with IT.

Name	Device	OS	Registered
Chang Chia-hao	Apple iPhone 15	iOS	2025/10/20
Lin Ya-ting	Google Pixel 7a	Android	2024/06/11
Hsu Chih-ming	Google Pixel 8 Pro	Android	2025/12/03
Huang Mei-ling	Google Pixel 7a	Android	2024/09/27
Wu Szu-yu	Samsung Galaxy S24	Android	2024/03/15
Chen Po-han	Google Pixel 7a	Android	2025/01/08

※ Last updated 2026/03/02. IT policy: register a new device within 30 days of switching.

FILE 08

Company Slack logs

Exported by Night Heron; company IT can read every public channel. Quoted as written; punctuation and spacing are untouched.

random

Chang Chia-hao 08-20 12:41
NEW PHONE ARRIVED!!! finally switched from iPhone to the Pixel 7a ☒ night mode is insane 😍😍

Wu Szu-yu 08-20 12:45
congrats~ remember to update your BYOD registration with IT~

Chang Chia-hao 08-20 12:46
will do next week ☒☒

Huang Mei-ling 08-31 18:02
Finally stuck the 'Onion Cat' sticker from Open Source Fest on my laptop, right of the trackpad. This black ThinkPad has some colour at last. That's all.

Lin Ya-ting 08-31 18:10
Cute, love the color. I only got a T-shirt. Save me one next time. That's all

general

Hsu Chih-ming 09-03 10:15
A reminder to all colleagues: before signing an NDA with any outside organization, please send it to Legal for review. Thank you for your cooperation.

Chen Po-han 09-08 09:30
FYI im in singapore for client meetings 9/13-9/16, LINE me if urgent, will reply ASAP

Wu Szu-yu 09-15 09:12
did everyone see that forum post… 😨 the support lines haven't stopped ringing since this morning~

Hsu Chih-ming 09-15 09:40
Legal is now handling the matter. Please do not discuss it in any channel. Thank you for your cooperation.

tokyo-expo

Huang Mei-ling 09-10 16:20
The booth demo videos are in the 'Expo_2026' folder on the shared drive. Please familiarise yourselves with them before we leave. The spare phones for Taiwan stay with IT. That's all.

Chang Chia-hao 09-10 16:24
got it!!! tokyo here we come ✈✈ everyone back in taiwan send good vibes ☒

CC **Chang Chia-hao** `09-14 18:05`
expo's done for today!!! dinner's at the place across from the hotel

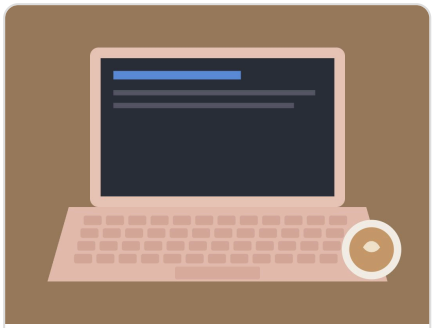
HM **Huang Mei-ling** `09-14 18:07`
Noted. Lobby at 19:00. That's all.

FILE 09

Public social posts

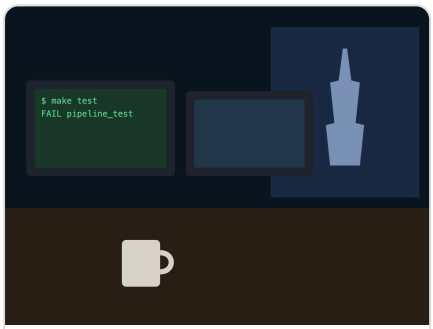
Posts set to public on PicNote; anyone can see them. Times are Taipei time (UTC+8). Huang Mei-ling: no public account found.

@jiahao.chang (Chang Chia-hao) · 09/14 22:31 · Story
back at the hotel after the dinner and DEAD 😵 booth duty again tomorrow lol
Location: Hotel Sakura Shinjuku



@jiahao.chang (Chang Chia-hao) · 09/13 20:10
Tokyo trip day 1, my desk for the week ☒☕ expo opens tomorrow!!! nervous
Location: Shinjuku, Tokyo

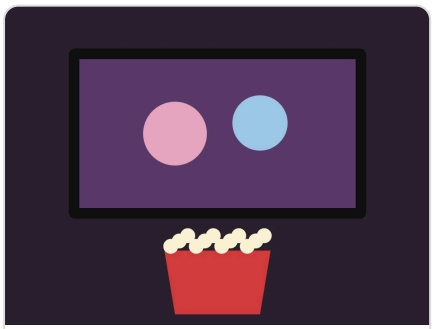
@jiahao.chang (Chang Chia-hao) · 08/20 12:50
NEW PHONE!!! switched from iPhone to the Pixel 7a ☒ night mode is unreal 😍
Location: Taipei



@yating.dev (Lin Ya-ting) · 09/14 22:30
Another day of debugging past midnight. Fourth coffee. That's all
Location: Taipei

@chiming_hsu (Hsu Chih-ming) · 09/14 21:05
Day three in Seoul! Shot Myeongdong at night with the Pixel 8 Pro zoom, you can read every sign ☒☒
Location: Myeongdong, Seoul

@bohan.chen (Chen Po-han) · 09/14 21:40
marina bay at night never gets old. back to work tmr ☒
Location: Marina Bay, Singapore



@siyu.wu (Wu Szu-yu) · 09/14 22:15
monday night = drama night~ ☒ work again tomorrow tho
Location: New Taipei

FILE 10

Appendix: what’ s on the web

Public information the investigator found with a search engine.

World time zones

Offset	Cities
UTC+7	Bangkok, Hanoi, Jakarta
UTC+8	Taipei, Singapore, Hong Kong, Shanghai, Kuala Lumpur, Manila
UTC+9	Tokyo, Osaka, Seoul

Smartphones set the time zone automatically: abroad, they switch once on a local network, and the camera records photos in that time zone.

How phone cameras name files

Brand	Format
Google Pixel	`PXL_date_time+ms (UTC)`
Apple iPhone	`IMG_number`
Samsung Galaxy	`date_time (local time)`

Hotel Sakura Shinjuku

Six minutes from Shinjuku Station South Exit. Every room has the hotel’ s own notepad: a red header reading “HOTEL SAKURA”, with “SHINJUKU • TOKYO” below.

Open Source Fest 2026

Held in Taipei on 8/22–8/23. This year’ s giveaway was a limited run of 300 “Onion Cat” stickers: an orange cat head with an onion sprout on top. Many people stuck theirs on their laptops.

BeatBird privacy policy (last updated 2024/05/01)

Collects name, date of birth, email, postcode, health data and device ID. “We never share your personal data with third parties without your consent.”

ANSWER SHEET

Answer sheet

For every answer, note which file the evidence comes from.

Part one: find the leaks

1. Night Heron turned off GPS. What did the photo's metadata still give away?

☐ GPS location ☐ Phone model ☐ Time zone ☐ Photographer's name ☐ Time taken

---

2. What did the picture itself give away?

☐ Hotel notepad ☐ Sticker on the laptop ☐ View from the window ☐ Logged-in account on screen ☐ Café name on the cup

---

3. What did the post's writing give away?

○ The IP address it was posted from ○ Spelling and punctuation habits ○ The email used to register

---

Part two: find Night Heron

○ if they fit, × to rule them out.

Clue	Chang Chia-hao	Lin Ya-ting	Hsu Chih-ming	Huang Mei-ling	Wu Szu-yu	Chen Po-han
Received the memo	○	○	○	○	○	○
Time zone +09:00						
Phone model						
In the picture						
Writing style						

4. Who is Night Heron? Give at least three independent pieces of evidence.

Bonus

B1. Even with the EXIF wiped clean, one more thing gives away the phone's brand. What is it?

B2. Two suspects are easy to misjudge at first. Who, and why?

HINTS

Hints

Only when you’ re really stuck. Cover them with paper, reveal one at a time, and keep count.

> Hint 1 · Start with the photo
> Night Heron says GPS was off. In file 04, apart from GPS, which fields aren’ t camera settings?

> Hint 2 · Time zone
> +09:00 isn’ t Taiwan’ s time zone. Check the appendix, then the attendance sheet in file 06: who was where on the night of 9/14? Careful with Singapore.

> Hint 3 · Phone model
> The BYOD register dates from March. Did anyone change phones since? See the Slack logs in file 08 and the posts in file 09.

> Hint 4 · In the picture
> The two close-ups in file 03: the notepad matches someone’ s hotel in the attendance sheet; the sticker and the laptop’ s colour turn up in Slack and on PicNote.

> Hint 5 · Writing
> Compare British and American spelling (colour or color, realise or realize), the quote marks, and the sign-off "That's all." One person writes much the same way, but was in Taipei that night.

> Hint 6 · Bonus
> Look at the attachment’ s file name, then at the appendix on file names.

S T O P

Solved it?
The truth is on the other side of this page. If your answer sheet isn’ t finished, go back.

The solution pages are printed upside down: turn the whole file round to read them.

CASE CLOSED · 2026/09/17 03:12

The truth

Night Heron is Huang Mei-ling. Product manager and keynote speaker at the Tokyo expo. The photo was taken in a hotel room after the dinner on 9/14, and posted five minutes later.

What gave her away

Leak	Evidence	What it means
Time zone offset	Offset Time Original: +09:00	The photo was taken in UTC+9 (Japan or Korea), not Taiwan. 23:47 there is 22:47 in Taipei, five minutes before the post went up.
Phone model	Make: Google / Model: Pixel 7a	Names the device outright.
File name	PXL_20260914_144712345.jpg	Even with the EXIF wiped, "PXL_" says Pixel, and the digits are the UTC time.
Hotel notepad	Bottom left: HOTEL SAKURA · SHINJUKU	In Shinjuku, Tokyo, not Seoul.
Laptop and sticker	A black ThinkPad, an Onion Cat sticker right of the trackpad	Matches her 8/31 message in #random exactly.
Writing style	British spelling (realised, postcodes), single quotation marks, the sign-off "That's all."	Matches how she writes on Slack.
Account name	night_heron_0914	0914 is the date of the post: the account was made that day. It points at no one by itself, but shows how people slip dates, birthdays and other personal details into names.

Ruling people out

Clue	Chang Chia-hao	Lin Ya-ting	Hsu Chih-ming	Huang Mei-ling	Wu Szu-yu	Chen Po-han
Time zone +09:00	Tokyo	Taipei	Seoul	Tokyo	Taipei	Singapore
Pixel 7a	switched 8/20	—	8 Pro	yes	—	—
Notepad (Tokyo)	yes	—	Seoul	yes	—	—
Laptop + sticker	rose gold, no sticker	—	—	yes	—	—
Writing style	no	close	no	yes	no	no

Traps

- **Chang Chia-hao**: the BYOD register says iPhone 15, but it dates from March; he switched to a Pixel 7a on 8/20, and stayed at the same hotel that night. What rules him out is the laptop: rose gold, no sticker.
- **Chen Po-han**: abroad, on a Pixel 7a, and the man behind the deal. But Singapore is UTC+8, the same as Taiwan.
- **Lin Ya-ting**: writes a lot like Night Heron, signs off "That's all" and uses a Pixel 7a, but spells the American way ("color") and was in Taipei that night.
- **Hsu Chih-ming**: the post says "the legal team has known all along", which makes Legal look suspicious. In fact he was in Seoul, with a Pixel 8 Pro.

No single clue is enough. Cross-referencing is what makes de-anonymisation powerful, and what makes it dangerous.

What happened

After the client dinner on 9/14, Huang Mei-ling went back to her room in Shinjuku, opened the ThinkPad and stared at the memo for a long time. At 23:47 she photographed the screen with her phone, and five minutes later pressed "Post" on the forum.

She remembered to turn off location. She forgot that her phone switched to UTC+9 the moment it landed in Tokyo, and that the camera writes its model into every photo. And the Onion Cat sat right at the edge of the frame.

Early the next morning you sent Night Heron your report. The post came down; a journalist was asked to verify the story, and through the journalist's source-protection process it was published again as a written account. This time, without a photo.

Next time you post

- **Strip metadata** with a tool such as MAT2 or ExifCleaner before uploading. Turning off GPS only hides the location.
- **Rename files.** Default names often carry the brand and the time.
- **Mind the time zone.** Phones switch automatically abroad, and a time zone is location data too.
- **Clear the frame.** Better still, don't photograph the original; describe it in your own words.
- **Pick random account names**, with no dates, birthdays, places or numbers that mean something to you.
- **Change your writing habits.** Spelling, punctuation, spacing and sign-offs are fingerprints.
- **Think about your anonymity set.** When only six people know, any detail can narrow it to one.

Further reading (in Chinese): anoni.net concepts · for journalists · tools

Answer sheet
1. The phone model and the time zone (GPS really was off) 2. The hotel notepad and the sticker on the laptop 3. Spelling and punctuation habits
Bonus B1: the forum kept the original file name PXL_…; “PXL_” is the Pixel camera’s naming. Bonus B2: see “Traps” above.
Rate yourself No hints, right first time: Chief Onion Investigator · Three hints or fewer: Senior Privacy Volunteer · Otherwise: Trainee Investigator