CS Puzzle Hunt: (Taking) the Fifth

Thanks to the solvers of the 2008 CS Puzzle Hunt, A. Random Hunter has been working for Monosoft™ in their Underhanded Activities department for a year and a half now, and has been responsible for many profit-making activities that he can’t tell you about. In fact, this is now a major problem for him. He has been accused of theft, and though he is in fact innocent, the evidence that would clear him is an industrial secret, and Monosoft™’s brutal Non-Disclosure Agreement does not make exceptions in this case. In depositions so far, he has been forced to “take the fifth” and refuse to answer questions - even though in this case his answers would not incriminate, but rather exonerate himself! So, he has arranged for you to “discover” the evidence that will get him off the hook without implicating himself in the discovery. He has forwarded a list of eleven people to contact, each of whom will have a small bit of evidence to contribute*. (They can’t tell you their information straight out either, for fear of Monosoft™.) With all eleven bits (or maybe fewer!), you should be able to conclude where and how to find the final, exonerating piece of evidence! The full-color original of this document will be very important and is available online at http://www.cs.rit.edu/~zjb/hunt.pdf.

The Zen Master

“...” The Zen master does not need to speak.

Send one person to 70-3600 at 1:30 to play Zendo with the Zen master.

The Administrative Assistant

“Sometimes I have to talk really fast to get all my tasks done, and I’m afraid I might leave out some parts. Excuse me, I need to make an on-campus call, now what was that number...”

BRWNBUERANGEGEENBLCKREYELLW
HOMNBAIEYCNOSAWONRJ
PERPYTHNUBYLSPAAAJAV
LONGULEOPARTGERSAKEZEBR
HYMESAGBYBAIL

* Each piece of evidence in this case is a positive integer. Puzzle answers can be verified by sending an email to zjb-hunt-answers@cs.rit.edu with the subject “Puzzle n” and the answer only as content. The answer response system can be tested by submitting the answer 123 for Puzzle 0.
The Cryptographer

“Of course I can make complete, well-formed strings with a four letter alphabet!”

(The shadows are just a cool - if inadvertent - effect and have no puzzle content.)

The Mailroom Guy

“I’ve got some envelopes here, but they only have names and zip codes, if that…”

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
<th>Name</th>
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<tbody>
<tr>
<td>Calvin C.</td>
<td>Angie N.</td>
<td>Edwin G.</td>
<td>Eric P.</td>
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<tr>
<td>12513</td>
<td>14301</td>
<td>14728</td>
<td>15030</td>
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<tr>
<td>Mason K.</td>
<td>Sean D.</td>
<td>Diane E.</td>
<td>Lance J.</td>
</tr>
<tr>
<td>29481</td>
<td>32460</td>
<td>33004</td>
<td>35045</td>
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<tr>
<td>Grace V.</td>
<td>Chase W.</td>
<td>Albert T.</td>
<td>Emily S.</td>
</tr>
<tr>
<td>36255</td>
<td>41512</td>
<td>46052</td>
<td>52064</td>
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<tr>
<td>Alvin I.</td>
<td>Brian B.</td>
<td>Mario M.</td>
<td>Sadie U.</td>
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<td>59486</td>
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<td>61721</td>
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<tr>
<td>Nate O.</td>
<td>Marge X.</td>
<td>Tegan Q.</td>
<td>Olive H.</td>
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<td>65759</td>
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<td>72733</td>
<td>76460</td>
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<tr>
<td>Sylvia A.</td>
<td>Noel R.</td>
<td>Lacey L.</td>
<td>Simon F.</td>
</tr>
<tr>
<td>79560</td>
<td>79749</td>
<td>92021</td>
<td>CA</td>
</tr>
</tbody>
</table>
The Code Monkey

“Hey! I resent that! Can’t you tell the difference between monkeys and apes?”

http://www.cs.rit.edu/~zjb/hunt/code-monkey

The Number Theorist

“I’m fond of all sorts of properties of numbers, whether or not in sequence.”

- Shoe size one larger than kids’ 13
- Excel spreadsheet’s topmost row
- Austin Powers character played by Robert Wagner
- Recycling code for HDPE
- Cricket shot also called a boundary
- _.H (Youth organization originally focused on agriculture)
- Isoprene units in a lycopene molecule
- Network consistently third in Australian TV ratings

- Shooting guard, in coachspeak
- Lily Allen single released 8/24/09
- Ohio state highway that connects Leesville and North Lima
- AM frequency of WBZ
- Number associated with asteroid Ohta

- England’s victory margin over Ecuador in the 2006 FIFA World Cup
- Star Trek: Voyager episode 93
- Edition of "AI: A Modern Approach" recently deprecated
- New York City subway line that terminates at 148th St
- Course number for biology at MIT
- Yao Ming’s jersey number in the 2008 Olympics
- Car driven by Jeff Burton in 2009
- LXVI

- Only even prime number
- Proposition to ban same-sex marriage in California
- Erie Canal lock in Pittsford
- Disco popular in the 70’s made famous in several movies (with "Studio")
- Isotope of Cd in highest natural abundance
- Area code for Milwaukee
The Math Teacher

“Killer sudoku is actually a great teaching tool. Oh, and this quarter we’re also learning about cryptograms…”

The Matchmaker

“I really enjoy bringing like-minded people together and seeing what patterns they come up with.”

http://www.cs.rit.edu/~zjb/hunt/MatchMaker.html
ACROSS
1. Castle defenses (2, 2)
6. Roman goddess of agriculture (3)
11. Let go free (3)
15. Like draft beer (3)
16. Kalamata, e.g. (5)
17. Type of loading? (3)
19. Stop (3)
20. Send to a specialist (5)
21. Aviation innovator Burt (3)
22. ___ Kan (3)
23. What to do, part 1 (4)
26. Syracuse athletes (6)
28. Dora's iguana friend (5)
29. A monkey has one, but an ape doesn't (3)
30. Yoko (3)
31. Sick (3)
33. However, poetically (6)
35. In the style of (6)
37. to the finish (4)
40. Acting (3)
42. He played the Cowardly Lion (6)
46. What to do, part 2 (4)
48. "That's a lie!" (12)
51. Pt. of speech (3)
52. Clothing store section (6)
53. Giants backup QB David (3)
54. Major seller of WoW gold (8)
55. "Nights in White Satin" band (6)
57. What to do, part 3 (4)
59. Vertical member in a wall (3)
60. Israeli politician Abba and family (6)
62. Dominant national rugby team (6)
63. Unknown, on a schedule (12)
66. Exist (3)
67. "Book of ___" (current movie) (15)
68. Least tan? (6)

DOWN
1. Philadelphia (4)
2. Last call time, perhaps (6)
3. "___ of Two Cities" (9)
4. Many grad students (8)
5. Part of a requirements list (6)
6. Foot ailments (3)
7. Lifts, on this side of the pond (7)
8. Abundant (4)
9. Landon Donovan's current club (6)
10. Tempurpedic competitor (6)
11. Type of lock? (3)
12. Guitar pioneer Les (8)
13. Part of a Star Wars robot's name (6)
14. Nearby climbing venue (6)
15. ___ many levels (3)
16. Not what the O in OPEC stands for (6)
17. "The Company" (6)
18. Children's hospital facility (12)
19. Stop (3)
20. Send to a specialist (5)
21. Aviation innovator Burt (3)
22. ___ Kan (3)
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The Photographer

“Don’t tell my boss, but I’ve been doing some freelance work taking publicity shots for my friends over at the Rainbow Coalition.”
The Jeweler

“These strands are all the same length, and they keep sticking together - in the same pattern eight times! Maybe I need to go to the library for more research.”

- Swims like a dog?
- Small weapon carried at the waist
- Margarine brand said to lower cholesterol
- Different chemicals with the same formula
- Dress blues, e.g.
- Tooth coatings
- Oklahomans
- One still learning the ropes

- Animated show
- Convenience store chain
- Crayfish
- Main character in books by Abby Klein
- Nuku'alofa residents
- Publish again
- "Scram!" (2 wds.)
- Splashed with red wine, perhaps

- Bach's "_______ and Fugue"
- FDR's wife
- Feeling, hearing or tasting
- Hail Marys, e.g.
- *Lenothrix canus* or *Tomorys grandis*
- ________ Rochester International Airport
- State policeman
- Study again after having forgotten
Some additional information:
(Identities have been hidden to protect the innocent)

- α, β, and γ have the same first digit
- β is between F_{25} and F_{26}, where F_1 = F_2 = 1 and F_n = F_{n-1} + F_{n-2}
- γ is a multiple of 64
- δ starts and ends with the same digit
- ε has more even digits than odd digits
- ζ has prime factors of 1, 2 and 3 digits
- η and ξ end in the same digit
- θ is a substring of the first ten thousand digits of π
- ι when converted to base 4 is a palindrome
- κ is the concatenation of two European country telephone dialing codes
- λ requires more than 10 letters to write in Roman numerals (allowing for the use of the overline to indicate numbers over 1000)

Now, the where and the how of collecting the evidence:

Where: \( \iota_2 \eta_2 - \gamma_1 \delta_3 \beta_4 \lambda_3 \)
How: \( \kappa_3 \varepsilon_1 - \iota_3 \theta_1 - \zeta_3 \alpha_1 \)