Web Accessibility for Aliens

Sean Vivier

As much as Flash Kennedy loved to lose himself in code, he also loved the energy and buzz that came from being around people. So of course they made him the face of user testing. It only made sense, and he loved it besides.

They'd already set the space aside as Funnel Web Development's device lab, where any developer had a chance to check their site's performance on many a laptop or tablet or phone. It already had Funnel branding everywhere, with the logo so much like a spider's funnel web and also so much like a grid representation of the warped space around a black hole with hints of lines of light along fiber optics through a cable.

Flash had spent the afternoon confirming that the space felt welcoming to the testers and to make sure they all had their own computer and their own space to work. While he waited for everyone to arrive, he fondled his ID badge with anticipation. Every so often he caught sight of his real first name and winced. Then he'd decide to drop the badge for a better impression, until his hands found their way to it again.

He'd only had to explain the web app in beta: MatingDance. Answer compatibility questions on the app, then choose pictures of potential matches in the area you liked, and if you both choose each other's photos and the algorithm regards you as compatible, you get to communicate. An app for all facets of attraction.

After that, he set them free to explore it, and Flash waited on pins and needles to see their comments. He watched them all use it, and every time they understood a step without any prompt, he felt a little cheer inside that he forced himself to contain. It felt right to see something he had made, in part, and to see it serve people.

One of the testers flagged him, and he brightened as he hurried over. "Yes?"

The older gentleman literally scratched his head. "I don't get it. I've been pressing this gray OK button a few times, but it's not doing anything."

Flash knew all the technical reasons, of course. He knew about components and state, he knew the conditional boolean prop that made the button gray and disabled under one state and blue and active under another state, and he knew to explain how a trigger event parsed data and

authenticated it before it set the state of the boolean value to its opposite.

He knew all that, but he also knew that he needed to code-switch from technical detail to layman's terms for the normies. "That's because it won't work until you've filled every field on the form."

The man sniffed in indignation before he raised his voice. "Well, why are you putting a button there if we can't press it? I see a button, I want to press it. You trying to make us feel stupid?"

"Oh, no." Flash knew the first thing he had to do was assure the man. Nobody in the office had those instincts. "This is why we do user testing. So you can tell us what we did wrong. I'll bring your concern to the team, so we can fix it."

The user settled. Flash had taken all the blame, which left none to fall on the gentleman. He made his way to the back room, where the rest of the team waited. Here, among the pros, he got to code-switch to occupational lingo.

"Just dulling the disabled buttons doesn't have enough of an affordance that they can't click it. I think we need to hide them when they're disabled and make them show when they're active."

Lucas Mudd bent to write that on a clipboard, dutiful and dutybound as ever.

Madison Belen, the team manager, frowned, though. "Sounds like a lot of work."

Flash shrugged. "We do more work so the user can do less, that's the programmer way. Besides, we only need to make the change on the WizardButton component the once, and we're good everywhere."

Madison offered a begrudging tilt of her head. Flash knew by now to take the small victory and made his way back to the user test.

As soon as he got back into the room, an Algolian raised his hand. The alien dressed in a conglomeration of tanned hides that he had no doubt taken from roadkill, fox and wolf and mountain lion mixed together. Flash hurried over. As soon as he did, the Algolian spat a sharp-edged stone from his beak to his hand. Flash knew they used those stones to macerate their food, given they had no teeth. He had never seen any two alike, and they always seemed to hold a personal sentimental value, but Flash didn't know the specifics.

With his beak clear, the Algolian managed his English a bit better. "I don't know if you want my advice. . . ."

Flash knew the lowered posture from both humans and Algolians, a chance to look smaller and show submission. He'd learned from humans to nip that low self-esteem talk in the bud, long before he had ever met an Algolian.

"No! No! Your feedback matters. Please, tell me."

"Well . . ." The Algolian hesitated, but did proceed. "For an Algolian, it is strange to read top to bottom. We read bottom to top. We're scavengers, so, by instinct, our eyes fall downward first."

Flash felt some heat on his cheeks. He had never even considered such issues. He felt ignorant. He hated that feeling. It burned against his pride.

He said only, "Huh."

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Madison sauntered into the programmer bullpen. Flash pulled his mind out of his code and checked the clock on his screen. Time for the stand-up meeting. He rose, and he walked to the center of the room and the chess set there, surrounded by action figures like Lion-O and Wolverine and Godzilla, where Lucas Mudd and Paige Bile joined them.

"Yesterday, today, blockers," Madison prompted and gestured at Lucas.

Lucas consulted his notes and barely lifted his neck to answer. Head down and dutybound, always. "Yesterday, I got all those functions written on the server end. Today I plan to hook them into the API call so Flash and Paige can actually use them. No blockers so far."

"Great. Flash, yesterday, today, blockers."

"Well, yesterday was user testing for our profile wizard. I got a lot of good feedback, and I already changed the WizardButton component like we discussed just now. Today . . . well, that's where the blocker comes in. An Algolian told me they read from bottom to top. I'd love to do some internationalization and allow more accessibility for more races, but I'm not sure if I have the resources or the bandwidth."

Flash saw Lucas duck his head and take notes. A good sign, though no one else spoke. He offered some more.

"I mean, look at Chinese. That can run right to left and top to bottom, and we'd make the change for them."

Lucas still looked down when he spoke. "Ever since contact with English, Chinese can run in pretty much any direction and a native speaker will understand."

Lucas looked to Flash to see his reaction. He must have seen Flash's annoyance, because Lucas lowered his eyes in chagrin and looked away.

Paige frowned. "Algolians. Aren't we supposed to call Algol what they call their star?"

Flash nodded. "I would, if I could pronounce it. But I don't have a beak with a stone in it to form their language."

Paige shook her head. "But I've gotta call Polaris Demephran now. BS. It really is ridiculous how everyone keeps finding loopholes for all these PC rules so you never know what you're supposed to say."

Flash would call Paige a brogrammer, were she a man. He didn't much expect support from her. He still kept his eyes on Madison.

"Yeah, I don't want to spend a ton of money on the Ghouls," she said. "We were at war with them a year ago."

Flash winced at the slur Ghoul, but he pressed. "That's exactly my point, though. Why did we go to war with them?"

Paige sneered. "Because we found them on a human ship eating our people."

"Right. Because they're scavengers and their default assumption is to eat the dead. We didn't know that about them, and so we assumed they had attacked and killed the crew, even though they hate any kind of confrontation. And they misunderstood us, too. Speaking of autonyms and exonyms. You know what their word for human means? Literally?"

Paige shrugged. "I dunno. Food?"

"Mindless horde. They didn't understand military discipline, and how we can keep fighting together the way we do. So they killed in what they saw as defense, and they didn't think they were killing sentient beings. You've got to admit, we get along a lot better now that we understand each other better. And that speaks to my larger point. Our apps need to work for everyone who uses them. Human or Algolian or Demephraner or whoever."

They all bit their lips. Paige and Lucas also kept their eyes on Madison for her verdict.

"No," Madison said at last. "Concentrate on the other feedback on the user test, the stuff we can do without much trouble. But we're not reworking our entire society for them. They're on Earth, they can get used to reading our way."

Madison turned to Paige for her three questions. Flash's ears buzzed so he didn't hear the details. Something about the client side calculations for the compatibility algorithm. He still wanted to serve everyone on their app, he just didn't know all the ways how.

Well, he supposed he had a new task on his plate. Flash needed to become a champion for alien accessibility online, the right thing to do. No matter the pushback.

<p style="text-align:center">* * *</p>

Flash had a mission. It's how he worked best. Pick a passion and follow it all the way down the rabbit hole. He always came away with a deeper understanding of the world.

It did cause some slight problems. For example, he had to spend his whole day at work fixing picayune issues with the MatingDance dating profile wizard while his mind raced in the background, churning and burning, longing only for more information to fill the gaps and offer solutions.

Well, now the bus had come to take him home. Now he had a chance to do as he pleased. He reached right into his pocket for his phone and opened it to a Google app. A search for alien web accessibility gave him too many options, so he narrowed it to Algolian web accessibility.

He found a few articles that he read at a fast clip. They didn't offer much that he didn't already know from speaking to that one Algolian in the user test. They always read bottom to top at first, no matter how many times you trained them to try otherwise. It was instinctive, not

learned. They also hated anything that might be considered anything like confrontational language, which meant calls to action had to be crafted as something gentle.

Well, it was something, not a lot. He risked a quick look at the street outside the window to make sure they hadn't reached his stop. He had plenty of time to spare, so he replaced Algolian in the search bar with Demephraner.

Demephraners, he knew, had huge wings to help them fly. He'd seen them sell rides on themselves to cover the cost of the massive caloric needs that flight demanded. He'd even taken a ride on them once, as much as he'd found it not for him. They priced everything by the cost of a slave, even though they had abolished slavery centuries ago. That's all Flash had known before.

He did find one study on Demephraner web usage. They had amazing eyesight, so they didn't need larger fonts. When given control, such as with browser tools, they invariably chose the smallest possible font. They also liked movement on a screen, even if only one thing. It made them feel wrong, they said, to see everything still, like everything had died. To spare themselves, they liked to scroll static sites in a constant movement.

Flash felt delighted to learn even that much. Knowing these secrets, he'd know how to make the web better for everyone who used it.

He checked the progress of the bus again and felt his stomach move. He had definitely developed some motion sickness. That's the price he paid for reading in a moving vehicle with constant starts and stops. A price he'd have to pay, as he tried to think of other alien populations on Earth.

He didn't want to get home. He wanted to stay on this bus forever and learn everything possible. His excitement made his heart beat faster and spun his head. He bent over his phone breathing hard, eager to consume as much as possible. The longer hair on the left side of his head fell to block his eyes, and he had to force it back behind his left ear.

A search on Kentil web accessibility told him about the flesh and blood aliens who practiced gene transfer with plantlife. A number had come to Earth to absorb pharmaceutical genes. Kentils liked to stay on web pages for a long time, to give them a sense that they had absorbed everything on it. No programmer need fear a rage quit from a Kentil. In fact, some folks suggested making server calls take longer than necessary, so Kentils didn't feel cheated.

Flash baffled. He really did live an isolated life. He didn't know any aliens in his orbit. He felt like he should know more aliens if he wanted to understand them.

Until then, he had only the word of others.

Two sentient races from the star once known as Beta Centauri, now Meruxon, lived in a predator and prey relationship. The prey called themselves a name that translated as Dawnward, or possibly Easterners. The predators called themselves Eveward or Westerners. Everyone called them Dawnward and Eveward because that sounded more epic.

At any rate, the search said that Dawnward and Eveward liked very different experiences online. The Dawnward liked calm and stillness and a sense of safety, with cooler colors. The Eveward liked motion and bold colors and action. They wanted to move and get things done. They liked gamified experiences. It seemed they practiced something they called Logical Honor, which no human had yet to come to understand in full. But if we mastered that concept, Flash thought, they'd know better how to serve them online.

That brought him to the Gherezan. They were a society of deaf-mutes. When the occasional speaker found itself born among them, they tormented it for violating their norms until it learned to remain silent and even claim they liked it better that way. Any website for a Gherezan needed no audio or voice recognition whatsoever.

He'd have liked to read more, but the sound of a bell to request a stop had sounded, and it drew him from his reverie. They approached his stop, and he had to put his phone away to get off. He used the walk to his condo's door to get his sense of balance back.

The reading helped. It did. But it acted as a proxy. What he needed to do is talk to aliens and discuss what they needed in their ideal website. Only trouble, he didn't know how he'd find that.

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Funnel Web Development allowed them 20 percent of their time toward personal growth. Flash knew how to take full advantage. He always took his whole Friday for himself. Every Friday morning standup meeting, that was his answer to the today question. Personal.

So he spent the day on i18n for Algolians on the wizard. Or perhaps he shouldn't consider it the shorthand for internationalization. Maybe they needed a new term, something like interstellarization. i17n?

The terminology didn't matter. The principle did. He forked a copy of the master branch and named it algolified, which he kept only on his local host. Then he worked on the Algolian version.

It actually didn't take much to do. The translators must have already made sure to present nonconfrontational language. Then, after some brainstorming that he explained to the rubber duck on his desk, he decided that when the JavaScript detected that the chosen language either began as or became Algolian, he'd give a class name, algol-friendly, to the wizard. Then he'd target that class in CSS to rotate it a hundred and eighty degrees, then let its immediate children flip so everything read right side up. In the end, he had instruction on the bottom, questions running upward, and the OK button at the top. He only had to remember to remove that algol-friendly class for any other language.

Or, if a layman asked him, he'd just say that he turned the screen upside down when someone chose to read in Algolian.

It felt right. To use deep thought, but to be better with people. Two of his favorite things.

It did take the full day, thanks to brainstorming and testing and debugging. He also realized almost too late that a transition from Algolian to English left the English version askew, and he had to make sure he righted everything on the switch.

Once he'd finished, he had to feel a swell of pride. In only a day of work, he'd made the web easier for a whole species. If only he knew how to convince Madison. That dilemma took more of his time.

In the end, he decided she'd never need to know, because she'd never use the app in Algolian. He merged the branch back with the master.

* * *

"I have bandwidth."

Flash spoke the magic words. He had no work to do, it meant, or very little. It told the rest he needed something productive to do with himself to benefit the team.

Madison nodded and stroked her chin. "Tell you what. Track the analytics. See how people have been using the beta before and after the changes. See if we made the right call and let me know. Once Paige has those compatibility results for you, you can integrate them."

"Great," Flash said, and he meant it. Because it then occurred to him that he had a chance to check how his Algolian changes fared.

He threw himself into that task first. Quite literally, he threw himself to his chair. It made his hair cover his eyes, so that he had to toss his head left and return it where it belonged, on the unshaven side of his scalp. Then he placed his earbuds to concentrate with some music in the background.

As soon as he opened the dashboard for analytics, he let the whole screen of data melt into a blur while he chose to see only those visits that came with Algolian chosen as the language. It didn't offer any personal data beyond the chosen language and the city of origin based on the IP address. His heart beat a bit faster as he felt his own longing for the desired results. It always took so much work inside himself to hold back his desires against the dispassionate need for objective unbiased data.

For all that effort at self-control, he did pump his fist when he saw the results. Every visit before his change, Algolians quit right at the wizard. Only the number of seconds they remained on the page varied. But as soon as they reached the new bottom-to-top wizard, they progressed. Most even reached the end and submitted their profile. No matter the city, they all got the wizard to work.

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He leaned back in his seat, relieved, with hand on heart, even as he watched the video recreations of their user journeys.

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Flash stared at the JSON returned from the server in the developer console. Filled with dummy data for the user persona's matches, he had to decide how to present the information to that user in a way that made it easiest for the user to process. He felt like cards made the most sense. A card with some info for each match, click on it and it opened a drawer with all the data they had entered in their profile. He didn't want to overwhelm the user, though. Definitely a picture and a name. What else? They needed assurances of compatibility. He'd at least need to add the calculated compatibility percentage.

Well, start with that much and see how it looked. He created a new file for this MatchCard component.

He'd have gotten a decent start, but Paige stormed into the bullpen late. Flash tried to ignore her bursts of temper, but she spoke too loud.

"Fucking Eveward are a menace."

Okay. Now Flash pulled his earbuds and spun his chair to face her. One did not allow such talk to go unchallenged.

"That's why I'm late. I was trying to get here when an Eveward had to chase a Dawnward right in my path, and then the cops had to get involved. I tell you, they're running the police ragged with their antics."

"Now to be fair," Flash began, "Dawnward are literally the only species in the whole Galaxy that can provide nutrition to the Eveward."

Paige snarled at him, as if betrayed he didn't agree. "You can't just eat something that talks."

Flash touched his chest. "I get it. But if the Eveward don't eat the Dawnward, the Eveward all die."

"Then let them die!"

Flash's blood felt like it chilled. "You can't be serious. That's hate speech."

Lucas only followed their dialogue by casting his head one way, then the other, too hesitant to offer his own opinion.

"Yeah," said Paige, throwing her arms, "well, I hate them. I hate criminals. Sue me."

"That's awful." He hated the confrontation. He'd rather have a delightful time with everyone. But someone had to witness, for the greater good of civil society. "They're people."

She snickered. "They're aliens."

"They're nonhuman people. They have reason. They have feelings. They have society and morals. . . ."

"What morals? Killing other aliens?"

Flash bit his lip. It took some doing to get his rational thoughts together, when anger filled him. "The Eveward follow something called Logical Honor. They believe they all have to praise bravery, but only in service of a rational end. Jump from a cliff for attention, you're a fool. Jump from a cliff to save a child, you have Logical Honor. So, yes, they have a moral code." He regretted his next words before his wounded heart even said them. "Maybe more so than you."

A tense silence settled over the office. That new silence didn't stop Madison from coming out of her office to see the matter.

"What's happening here?"

Paige rolled her eyes. "Just talking about all the trouble the Eveward cause. Shouldn't even be allowed on the planet. It's our world, not theirs. They're guests here, and they owe the respect that any guest owes a host. Them and the Ghouls, they don't belong here."

Her every word bit his insides.

Flash appealed to Madison in a forlorn hope. "Do you not see the bigotry? That's not okay in a work environment. It's not okay at all!"

Madison raised a peacekeeper's hand. "You should be working, not talking about this. Compatible match cards. Private communication over the server with hashes and encryption and everything. Let's get back to it."

Flash maintained a death glare that Paige returned while she removed her coat. He only let it go when he took a sharp turn that agitated his hair. His screen awaited him.

He still wanted to expand the horizons at Funnel. Alas, he started to suspect he'd never have a receptive audience.

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Flash took his laptop to the office beanbag chair, the better to relax and get into the zone. He iterated over his match cards and profile drawer, then checked each new version as it hot-loaded on his screen. He struggled with what data to emphasize, until he decided to start with the basics, like photo, name, career, distance, and age. Then he put a bar for each dimension of compatibility—intellectualism, work ethic, helping others, money management, and so on—to let them decide which factor mattered most to them. Below that, he put all the rest of their information in lighter text.

He frowned at it. It still missed something. It didn't feel dynamic. And then he knew. He had the drawer slide onto the screen, then had the compatibility bars fill from zero to the number. That felt better. And it gave Demephraners and Eveward the motion they liked, without enough to upset the Dawnward or motion-sensitive humans. He could probably add a prefers-reduced-motion media query to spare the sensitive, come to think of it.

Flash took a moment to appreciate what he had made. Paige and Lucas just had to set a communication functionality on the server, then he just needed to create some kind of communication interface. Then they had it. MatingDance almost stood ready to help people find love. The idea charmed him. He liked that he got to play matchmaker in the most nerdy way possible.

Madison walked into the room and paused when she didn't find him in his seat. She spun slow until she found him on the beanbag chair and didn't bat an eye. She knew what to expect when it came to programmers.

"Hey," she said. "Let me see what you've got on the match cards so far."

"Rightio."

Flash did a crunch to get on his feet and make his way back to his desk. He plugged his laptop back into the setup, and his browser and IDE showed on two separate screens.

"Okay," he said. "These are all the fake people that match my profile and I checkmarked. Face, name, total compatibility score."

Madison nodded. "Good. And then more info once you click?"

"Exactly. I click—let's pick Bob, say—and I open the floodgates."

Now Madison frowned. "Why do these bars move? Why don't they start at the number?"

"Oh, that's to keep Demephraners and Eveward on task."

Madison rose very slow. Flash became very aware of the silence.

"I thought I said . . ." she began in a long breath, ". . . that we aren't changing everything around for aliens."

Flash didn't want another fight. But his passion flooded him, and he knew someone needed to witness, even if it got him nowhere.

"Accessibility is a professional standard in web development. It's ethics. We need to make our apps work for everyone. So I made it accessible, to meet that professional standard."

Madison only glared. "I'm the boss. I said no."

Flash shrugged, but he didn't dare meet her eyes, so he kept his eyes on the code. "I thought this was a flattened hierarchy."

Madison forced a smile. "We are flattened. But there's still a grade."

Out of the corner of his eye, Flash saw that he had an audience—Paige in the open, Lucas ducking and contrite.

Flash considered. Web standards didn't move Madison. He had to find some way to speak to her own values. Sad enough, he thought he knew the only thing that mattered to her.

"What if I can gather data that alien web accessibility increases revenue?"

That gave Madison pause. She watched him like a hawk. "All right, Flash. We'll set a meeting for tomorrow. Come with real data, or don't come at all."

She left the room, and Flash felt his heart hammer. He saved his changes to the project and

pushed them to the master branch. He had research to do.

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As he set foot off the bus, a Dawnward almost crashed into him. Flash had to back into the passenger behind him, while the Dawnward curled into an armored ball and rolled from him. An Eveward sped right after with an apologetic shrug and a crack of his tail. Flash watched them go before they rounded a corner, then turned to make sure he hadn't hurt the passenger behind him who now sat on the bus steps.

All right, so maybe the Eveward and Dawnward can be a bit . . . troublesome. That didn't make hate the answer. There had to be a more inclusive and understanding way to make sure their needs didn't wrong others. He just didn't know the answer yet.

Once inside Funnel, he set his sight on the work for the day. According to his answer at the standup meeting, he needed to create an interface for match communication. In reality, his mind wrapped around the upcoming meeting with Madison. He barely had attention for the new UI. Good thing they already had a similar text field component from a previous app that he just had to adapt to MatingDance's styling preferences and attach to the API call for stored messages.

The Microsoft calendar reminder pinged, and it brought a fluid sensation to his guts. He needed to get this right. Whole alien races depended on him. The pressure viced his lungs, but he still fought to breathe. It helped to take action.

So he sent an email in his drafts folder with all his links, and he stood. With a single breath to strengthen his resolve, he marched to Madison's office.

Madison showed far more disinterest. She noted him without a hint of enthusiasm or even bother. Nothing crossed her face, while she continued to type.

"Hey, Flash. Come on in. Just let me finish this. Oh, and shut the door."

Flash dreaded that last bit. He shut the door soft, but it still felt like it rang doom. You close the door to chew out your subordinate, not to share ideas.

Madison finished her task, then sat back in her chair. "All right," she said. "Wow me."

Flash nodded. He was good with people, and he was good with logic. Plus, he got to use a common vocabulary without need for circumlocution. He had this. At least he told himself so.

Straight into it. "All I'm asking for is what we already do. We have alt text on images so screen readers can describe them to the blind community, and so folks on poor connections can see a description of the photo when the photo doesn't appear. We have ARIA for the same reason. We avoid flashing lights so we don't give anyone a seizure. We use larger fonts to make sure anyone with vision can read, even if that vision has some impairment. We don't put red and green on top of each other for the sake of the colorblind. We offer translations for anyone who doesn't speak English. This is why you hired me as your UX guy, to find these solutions. We find solutions that make no difference to anyone who doesn't have these issues, but that make everything work so much better for the rest. That's why we need to add alien culture and biology to the issue."

Madison folded her arms. "We do those things because they're best practice, and sometimes because it's the law. Oh, and also, because alt text is good SEO. You're giving me a manifesto when I asked for data."

He nodded. If she wanted data, he had an avalanche. "Check the email I sent you just before I came over."

She raised a brow, and she checked her screen. He saw her click several times. Time to overwhelm her with reason.

"I'll start with Algolians. They make their own clothes and find their own food, but that means they need tools. They love our tools. They delight in them. They're less than a percent of our population but over 10 percent of tool sales. Tools4U redid their website to offer an Algolian version, and their sales shot through the roof.

"Demephraners spend an inordinate amount of money on food. Avery's Grocery changed their food delivery lists to a virtual stroll down an aisle, which incorporated the movement that makes Demephraners most comfortable. Now something like 95 percent of Demephraners shop online with them over their competition.

"The Kentil spend hours shopping for house plants and gardening supplies. They like to take their time. So the developers at Plant Planet made sure to prolong their API calls when a Kentil language is chosen. They actually had Kentils rage quit when data processed fast, so they increased conversions among Kentils by over 200 percent.

"It goes on. TechPlus got more sales from Gherezans when they removed videos with audio, which only frustrated them. A furniture store sold more Eveward-stye beds when they gamified the purchase process, to give them the sense of challenge they crave. A bank added more trust marks and more Dawnward felt safe enough to do business with them online. It goes on and on, and it's clear that accessibility isn't just good for them. It's good for our bottom line."

Madison bit her lip and sucked it into her mouth and bit it while she absorbed all the articles on her screen. Flash recognized that look. It's the look of someone who doesn't take new information to change her understanding, but changes information to match her current understanding. It's the look of someone who already knows her answer, just wants to rearrange her prejudices first.

"No," she said at last. "No, you already spent a day to move the Ghoul version, and another day just for research. If we want to personalize for all these species, we need more days for changes and research. Then we'll have to fix bugs and upkeep and . . . no, no, this is going to be way too expensive and time-intensive. That's schedule and budget we don't have."

Flash winced. He threw one last attempt, an attempt he already knew doomed to failure. "It barely takes any . . ."

"No. No, I'm afraid we can't. That's final."

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By the time the weekend came, they had MatingDance all but ready. It needed a few more bells and whistles to make it fit the definition of a progressive web app—a mobile version, push notifications, offline availability, that sort of thing—but it had all but come to fruition. Once they had users, they'd find the functionality to find each other, at least.

Flash knew he should let work go for the weekend, but he didn't know how. As much as he wanted to relax and stream or read something, he had to pace in his living room with nervous energy. He felt he should have given Madison a better reason, and he'd not be in this situation. Tell her to launch with what they have and add accessibility by degrees over time. He hated that he hadn't thought to make that argument in the moment. Or some better argument of any kind. He didn't know. Something.

He needed a walk. He needed some way to spend all this frustration. So he grabbed his Funnel team jacket and hurried outside. Fresh air greeted him, and that already calmed him a bit.

Right outside, not far, he saw two Gherezan communicate in their sign language. They moved their hands with such precision, because in the eye of a Gherezan, everything must be precise and proper. He watched it for a while. He had no concept what any of it meant, but it looked so beautiful in its intentionality.

Too many people probably just saw someone who didn't speak English, and not the amazing inner world of a nonhuman person. He hated that anyone might miss that beauty.

As he continued along the sidewalk, he saw kids eat ice cream and lovers hold hands. He saw yarmulkes and epicanthic folds and guayaberas and Polo shirts and crosses and Darwin fish and Uggs and jalabiyas.

He stopped at a storefront when he noticed a sign for Demephraner martial arts. Through the window, he watched two Demephraners approach with wings raised like a curtain or a shield or a wall. Each tried to get their wing within the wingspan of the other, as they whirled and stepped and moved their wings to counter. After awhile, one wing did get inside another wing with a feint. From there, the victor got close and held a choke long enough to establish dominance before they separated and pronounced a winner.

Flash smiled wide to see it. Different bodies had different mechanics, which demanded different martial arts. What a privilege to see it.

He continued along his way. He heard a muezzin call to prayer, as he made his way toward the park. He heard Spanish and Chinese from inside the same Italian restaurant. He saw two

women embrace and then make way for someone with a seeing-eye dog.

At the park, Kentils leaned against maple trees and played chess while they leaked sap. Beyond them, two Eveward seemed to stalk one another, until one grabbed the other's tail with his own tail. Now a drum began to beat, and the two Eveward moved their feet in perfect time, their rigid tails to communicate the leader's desire. He guided her to spin with a lift of that tail, then he tucked it to let her roll into his embrace before he spun her and then himself. Different bodies, too, demand different partner dances.

He wished he knew how to communicate all the simple joy and charm of all this difference come together in harmony. He wished he knew. Instead, he stood there, and he felt at a loss.

* * *

Monday through Thursday had a dull cast to them. He had work to do to make the final touches for MatingDance before launch. But it didn't consume him as it once had. It didn't consume him as the work almost always did. The world felt grey. All because he hadn't found a way to make it its best. Even as he watched it work splendidly, he felt like a failure.

Friday came, and with it the end of the last sprint and the compulsory applause. Next week, they'd start a new sprint for a new app. Until then, he had a day for personal work and no idea what to do.

When he had no other ideas, he read articles on Smashing or A List Apart. They wrote arguments so much more eloquent than he did. If only they had made his arguments. If only he had invited someone else to speak on his behalf. If only he'd had some aliens speak from their own experience.

He blinked at the screen, as one single tear of revelation blurred his vision. How had he not seen this? His first insight had come from an Algolian. Yet this whole time he tried to champion them rather than let them champion themselves.

Flash needed to know what they themselves wanted. He created a new file, simple HTML, to create an online survey.

* * *

Flash had never been to the W3C before. Yet here he stood in the heart of the voluntarist consortium that discussed and proposed web standards. No authority, yet extraordinary influence. He had no idea what to expect. He just felt grateful that Madison had allowed his vacation time.

She may have rolled her eyes when he had explained his trip, but she had allowed it, and that's all that mattered. He'd make a real difference, now armed with the results of his survey.

He scanned the floor for any sign where to go. A Dawnward approached him, and she already offered one of their particular bows that also drew their armor together.

"If I may interrupt you." Dawnward always took such care to learn flawless English so as not to offend, and they almost always spoke more formally than a native speaker. "Do you also await the Extraterrestrial Accessibility Working Group?"

Flash smiled wide. "I do." He offered his hand, which the Dawnward took after an instinctive flinch at the sudden movement. Flash had to remember to be careful with them, or why else had he come? "I'm Flash Kennedy."

"Hamathin. Flash . . . I have never met a human named Flash before."

The Dawnward wanted to ask a question, but she didn't want to pry. Flash read between the lines. "Yeah, it's a nickname. I used to run track, and I'm not a fan of my real first name." Hamathin curled a little bit more into a ball, and he knew he needed to make her feel safe to speak to him. Even if he had to choke on his real name to do it. "It's Sinclair."

"Sinclair is a formidable name." Hamathin spoke one of the complimentary lies her kind used to make everyone feel welcome and secure. "Yet I understand the preference for Flash."

Flash snorted. "You a programmer, Hamathin?"

"Learning."

"Good. We can use more aliens in the field, help keep us honest. I'll give you my card. We have an internship program at my company. I can't make any promises, but you should check it out."

She expanded her body, to show her softer parts. That's how he knew he had made her feel safe near him.

"If I can get everyone's attention!" The man in a sweater stood on a stairway landing and spoke well from his diaphragm. "If you're here for the ETAWG, the Extraterrestrial Accessibility Working Group, please follow me!"

Flash followed, with Hamathin close by his side. Maybe he hadn't convinced Madison or Funnel Web, but he'd help—in small part—to make alien accessibility on the web a matter of professional standards, and then they'd reach far wider.

Sean Vivier—pronounced like Vivian, but with an R—is a member of SFWA. In real life, he makes web apps for a company that specializes in automation and the Internet of Things. So, in essence, he spends his days making his favorite science fiction come true. He lives in central Connecticut, in a home he calls The Vivier Arms. If he isn't writing or coding, he's probably dancing. Learn more at http://seanvivier.com.