

Chapter 1 : Past and Future, a land before time fanfic | FanFiction

Terence Stephens became the first RMU player since Oct. 15, , to eclipse yards rushing and receiving. The last was NFL draft pick Tim Hall on Oct. 15,

Pierce advocated an approach of reaching geostationary orbit in successive stages of technology development, starting with nonsynchronous, low-orbit satellites. In the Soviet Union launched Sputnik, the first satellite to be placed in orbit. Amateur radio operators were able to pick up its low-power transmissions all over the world. The first satellite-based voice message was sent by President Dwight Eisenhower using passive transmission techniques. Because it was placed in an elliptical orbit that varied from low to medium altitudes, the satellite was visible contemporaneously to Earth stations on both sides of the Atlantic for only about 30 minutes at a time. Clearly geostationary orbits were desirable if satellites were to be used for continuous telephone and television communications across long distances. SYNCOM led the way for the next several decades of satellite systems by demonstrating that synchronous orbit was achievable, and that station keeping and attitude control were feasible. Today most satellites, both military and commercial, are of the GEO variety. The Evolution of Untethered Communications. The National Academies Press. Air Force in Three launches placed 26 lightweight pound satellites in near-geosynchronous orbit. These systems supported digital voice and data communications using spread-spectrum technology an important signal-processing approach discussed extensively in Chapter 2. The satellites were replaced in the s by the DSCS-II group, which increased channel capacity by using spot-beam antennas with high gain to boost the received power. Satellites offer several advantages over land-based communications systems. Rapid, two-way communications can be established over wide areas with only a single relay in space, and global coverage with only a few relay hops. Earth stations can now be set up and moved quickly. Furthermore, satellite systems are virtually immune to impairments such as multipath fading channel impairments are discussed in Chapter 2. But with the rapid deployment of undersea fiber-optic links, the use of satellite channels for telephony has been on the decline. The high capacity of fiber provides for competitive costs, which, combined with low latency, have attracted consumers. The future of the satellite industry depends on the emergence of applications other than fixed telephony channels. A new generation of satellite systems is being deployed to provide mobile telephone services see Section 1. In Detroit became the first city to experiment with radio-dispatched police cars. However, transmission from vehicles was limited by the difficulty of producing small, low-power transmitters suitable for use in automobiles. Two-way systems were first deployed in Bayonne, New Jersey, in the s. The system operated in "push-to-talk" i. Frequency modulation FM , invented in , virtually eliminated background static while reducing the need for high transmission power, thus enabling the development of low-power transmitters and receivers for use in vehicles. World War II stimulated commercial FM manufacturing capacity and the rapid development of mobile radio technology. In public mobile telephone service was introduced in 25 cities across the United States. The initial systems used a central transmitter to cover a metropolitan area. The inefficient use of spectrum and the coarseness of the electronic filters severely limited capacity: Thirty years after the introduction of mobile telephone service the New York system could support only users. A solution to this problem emerged in the s when researchers at Bell Laboratories developed the concept of the cellular telephone system, in which a geographical area is divided into adjacent, non-overlapping, hexagonal-shaped "cells. Throughout the geographical area, portions of the radio spectrum are reused, greatly expanding system capacity but also increasing infrastructure complexity and cost. Other than allowing experimental systems in Chicago and Washington, D. Cellular technology became highly successful commercially with the miniaturization of subscriber handsets. This approach was a departure from the circuit-switching systems used in telephone networks see Box

Chapter 2 : FalconBlog--Triumphs and Trials in the BGSU Falcon Nation: Past and Future Opponent Land

"Ball and Oats" gear in the Bull Run Store - If you've been waiting for some basketball gear in the Bull Run store Well now you can tell us "You Make My Dreams".

Blackwolf Waiting for your children to hatch is tough. Remembering all the things that led up to this moment is bittersweet. However, the promise of the future also brings despair. Response to prompt challenge on GoF. Anyway, this one-shot is in response to the prompt challenge over on the Gang of Five forum. This can be played for laughs, drama, or any other genre or 2 Do any of the prompts from previous months that you may have missed. I decided to go with the first one. And I was cutting this kind of close since I started it six days before the deadline. Waiting for your children to hatch is tough. Hope you guys enjoy it! Past and Future He was crouched near the nest, eyeing the three white orbs for any sign of movement. They were due to hatch any day now and he could barely contain his excitement. His mate, who was curled around the nest, looked at him with amusement. He had been like this ever since she announced she was going to lay eggs. She wanted to giggle at his child-like expression of awe as he awaited the hatching of their children. She actually chuckled this time. Traits that attracted her to him in the first place. Other Sharpteeth were indifferent and stern, mostly caring only about getting their next meal and survival. Sure, she was considered to be like those sharpteeth, but she had more empathy. And it was because of that empathy that she had met her loving mate. She smiled as Chomper now had a pouty look as he stared into the nest, looking much like a hatchling himself. Shifting so her side was leaning against his, she rested her head on the cave floor and began to doze off. Chomper smiled to himself when he felt her lean up against him and he looked over to see her fast asleep. He sometimes found himself admiring her while she slept, amazed by how peaceful she looked. For years, Chomper resigned to the fact that he could very well be a bachelor for the rest of his life. No other Sharptooth wanted anything to do with him when they learned his view of Leaf Eaters and his aversion to eating them. Then when he and his friends were well into the Time of Great Growing, they went on one of their usual adventures in the cave systems. Unfortunately, a cave-in cut off their way back to the valley and they found themselves in the maze of a large canyon. It was in the canyon that they encountered a female Sharptooth that had made her home there. Rather than trying to attack him and his friends as other Sharpteeth would, she led them out of the maze. She was even interested in learning a little Leaf Eater! Chomper may have developed a crush on the female Sharptooth by the time he and his friends left the canyon. For then on, he tried everything he could to get her to like him. He offered to teach her Leaf Eater and she accepted, something that made him ecstatic. Here was a Sharptooth he could finally teach to be friends! Soon his friends warmed up to her, accepting her as part of the gang and inviting her on their many adventures. Not long after, Chomper confessed to his feelings for her and when they were older agreed to begin courting. That was over three Cold Times ago. Chomper was startled from his thoughts by a soft scratching noise originating from the nest. He noticed one of the eggs wiggling in its place. He immediately perked up and nudged his mate. Numerous cracks began decorating its smooth surface towards the upper part of the egg. The egg bulged slightly as the hatchling clawed its way to freedom. Arya smiled and nuzzled against him, he lovingly returned the gesture. Suddenly, a clawed foot broke free of the shell, catching its parents by surprise. The other came free next, followed by a short tail. The hatchling was nearly identical to its father except for its slightly paler colour and orange eyes. It looked around with a chirp before spying its parents and chirping again. The parents cooed to their first born and leaned in to nuzzle the hatchling. The hatchling squeaked excitedly, eagerly nuzzling in return. Shakily, it pushed itself to its feet and tried to take a step forward only to fall backwards onto their tail with a yelp. Arya chuckled softly, nuzzling her baby comfortingly. The hatchling stood up again and successfully managed his first step, his talons digging into the ground for stability. He managed to toddle to the edge of the nest and stumble to the cave floor. His tiny face scrunched in determination as he got back to his feet, talons digging into the ground again. He then padded closer to his mother and looked at her with a look of triumph. Arya smiled and gave him a congratulatory lick. Talon does sound a good fit though. Their attention was pulled back to the nest when another egg started shaking. Cracks appeared quickly and few pieces fell away. With one final push, the head

broke free with a piece of shell sitting on top like a hat. The hatchling then pushed outward with their legs making the shell bulge out before shattering and making the hatchling tumble out into the nest with a squeak. The adult Sharpteeth leaned in to nuzzle their new baby like they did with its brother. The hatchling squealed in laughter as they tickled its belly. Drawn in by the commotion, Talon waddled over to insect his new sibling. She snorted in amusement when her daughter gave a tiny growl at her personal space being invaded by her brother. Talon mistook this as an invitation to play as he crouched playfully and wagged his tail before pouncing on his sister. He laughed harder when Arya stuck her tongue out at him. Memories flashed in his mind of his mother and how his daughter reminded him of her. Chomper smiled when the perfect name popped into his head. Chomper nodded bashfully, turning to the brawling hatchlings. They waited well into midday for their third egg to hatch, but sadly not even a twitch. A strange smell started to come from the nest that they, as predators, knew very well. The smell of death. Their last egg was never going to hatch. The joyous day quickly turned to one of sorrow as they went about clearing the nest of empty shells and the lifeless egg. They had experienced this kind of heart break before. Originally, Arya had laid five eggs but one broke during laying and another was stolen when they left the nest unattended monetarily. When he returned, he found his mate lying on the ground with the two hatchlings curled up at her side snoozing. It cheered him up somewhat. He sighed as he watched them, their limbs occasionally twitching or stretching in their sleep. Arya broke the silence. Chomper gave a small smile and tenderly nudged her face with his nose, wiping away the tears that escaped her eyes. They lapsed into comforting nuzzles and sniffing as their offspring slumbered. Sometime later, the two were roused by a voice outside their cave. Did they hatch yet? Did they yet Hatch? The Fast Runner was the most helpful and encouraging of their friends, besides Littlefoot. Ruby took her role of honorary aunt very seriously. So keep your eyes peeled for that! The author would like to thank you for your continued support. Your review has been posted.

Chapter 3 : Q&A: The past and future of Jaguar Land Rover

This is a reference page for land verb forms in present, past and participle tenses. Find conjugation of land. Check past tense of land here.

The company announced at its inaugural Tech Fest, a series of debates and a free public exhibition about the future of mobility. We will introduce a portfolio of electrified products across our model range, embracing fully electric, plug-in hybrid and mild hybrid vehicles. E-type Zero is based on a Series 1. The fully autonomous virtual concept explores mobility for the connected world of tomorrow, where vehicles could be shared not owned. At its heart is Sayer – the intelligent steering wheel that will revolutionise the way you live your life. Sayer is the first voice-activated AI steering wheel that will be able to carry out hundreds of tasks. The advanced speech recognition software will allow it to answer your questions, connect you to the news, organise your travel and select your entertainment. You will never run out of milk again. It will be your go-to device. A club which offers either sole ownership or the option of sharing the car with others in your community. For our customers, driving is about much more than getting from A to B. You will always be able to experience the sheer thrill of driving with the option to take the wheel. But this is a steering wheel like never before. Recruiting for the future with Gorillaz Jaguar Land Rover does not do ordinary recruitment. Gorillaz and Jaguar Land Rover have teamed up again to continue the search for world-class talent at Tech Fest. Successful players will be first in the queue for a chance to work at Jaguar Land Rover. For those unable to make it to London, the Gorillaz app coding challenge remains open worldwide. In a significant change to the way Jaguar Land Rover looks for candidates, fans are challenged to take part in a series of code-breaking puzzles to test curiosity, persistence, lateral thinking and problem-solving – all real-world skills the new generation of software and engineering talent must have. Getting out into the water and trying the board out for the first time was awesome. Plans are in place to create production versions of the surfboard. Autonomous Urban Drive can enable a vehicle to operate without a driver through a city, obeying traffic lights as well as negotiating T-junctions and roundabouts. Your digital butler The new Range Rover Velar is designed to take you further. It contains intelligent technology in the form of the quad-core processor; the brains behind the beauty of the Velar. The Touch Pro Duo infotainment system incorporates two high-definition inch touchscreens. We call this tailored technology Blade – your own digital butler. You can interact with your car from anywhere in the world. You can start it with your smartphone, lock or unlock it, locate it, check your fuel levels or even warm the cabin up before you get in. Designed and engineered to be beautiful, fun and intelligent, it is instantly recognisable as a Jaguar.

Chapter 4 : Seeing the Land: Past, Present, and Future | WCAI

Land use land cover changes and past and projected landslide occurrences To evaluate the relationships between landslide occurrence and LULC changes, we first analysed the past relationship, using LUM and CLC map and the LE catalogue.

But I think it fits the personality of the car, it is enabling the overall performance characteristic, as is all-wheel drive. As such it was an easy decision. I mean we looked at the F-TYPE maybe contrary to the past of the entire lifecycle of the product—so what are some of the things to do to continuously offer broader options and keep the product fresh? Because as you know, in this segment it is typically a very steep lifecycle. Build up very quickly but they also trail off, drop off quickly. We started with convertible, we added the coupe, we added manual, different powertrains, and there will be further surprises coming to keep that product top of mind for our enthusiast customers. So it was an easy sale. I think we finally found the right positioning.: You [can] explain seduction as design. What makes you special? What makes it different? You have to experience it. People that know it, can credibly talk about it. Tell me about F-Pace then. Clearly it expands the appeal of the brand to new consumers, but is it still a performance vehicle? I think Ian Callum said it best when he said, "I never thought we would do a Jaguar crossover. If you would have asked me 5 or 6 five or six years ago, I would have said absolutely not. And the same is true from the engineering perspective. The fact that Porsche has shown that you can build a credible performance vehicle in that category is terribly helpful. Because if Macan is able to do it, I think it gives us the confidence that we will be able to do it as well. And the fact that the market is accepting of a performance SUV or performance crossover is very good news. In terms of volume, where will the F-Pace land? Are you expecting it to sell more than the XE? What I know for sure is that these two will be our biggest volume in the Jaguar brand by far. The good news is we have the flexibility to react to market needs. If one is 10 percent higher than the other or vice versa, we can react to it. But both will certainly be the highest volume Jags. Should we be excited? They both get the TD6. About 32 percent [increase] in fuel economy over the V6 gas, and one interesting stat that I find really interesting: So in a year in a half, we have a new-generation car with all-aluminum that cut lbs. And it will come to Jaguar: What is the sales proposition for a Jaguar diesel? Is it a performance car, or an economical luxury car? It will still have a performance angle, a driving orientation. There is some trade-offs especially with a 4-cylinder diesel. It is still a quick car, it does have great torque, and fuel economy cannot be beaten. I drove in the XF last week, in the 4-cylinder and 6-cylinder diesel. The V6 was a phenomenal car. It has N-m lb-ft of torque—off the line that engine is absolutely phenomenal. I actually thought it was the best balanced car of all, the six-cylinder diesel. I learned a lot about the serious light-weighting that went into the XF: The all-aluminum structure, et cetera. What does the future hold for light-weighting Jaguars, and the F-Type in particular? Will it get smaller, or lighter, in the future? It is on an older platform. What the future will hold remains to be seen. We are focused on aluminum in all of our architectures and platforms, with the addition of other lightweight materials that you mentioned. And light-weighting the engines — Hypothetically, would the XE platform be a suitable platform for a future sports car? Or would it have to be something different? What I understand is that the whole idea of the architecture is very different than the old platform. There are similarities between XJ and Range Rover aluminum architectures; certain principles and practices can be done any way, with any product. Where will it take you? I think we said it today in the press conference, maybe not eloquently enough, when we talked about when the Jaguar will get Land Rover off-road technology. Give it to the Jag engineers to take the learnings and experience, to put it into Jag, and vice versa. Especially the electronic systems, the under-the-skin systems that apply to any car. From a customer touchpoint perspective, we are brand-centric and brand-focused. But everything behind the curtain, we will integrate to a greater degree. And not just product development, but other functions of the company as well. If you develop a system on the market side, direct-customer communications, you do that for both brands. The way you apply it might be slightly different, but the basic underlying structure and system is exactly the same. And that counts for the technology as well. We have a dual-branded engineering organization, a product development organization, they have people who are

specialists who are things: Design is completely separate. The new infotainment is dual-branded. The Ingenium engines will be used in both brands. Speaking of this, the new infotainment system seems like a massive improvement. Are you happy with it? We are, and we are probably more impatient than you are because we live with it every day – you get into different cars. The new-generation system is light years ahead. It seems like there are exciting things happening now. We have Special Operations, which has four elements: The exciting part about it is that these SVO, which today does the SVR and in the future will do more of it across the entire product portfolio. Those are [enthusiasts] target cars. And the Jaguar Heritage collection seems to be quite a success in bringing awareness to the brand. One was "why do you care about these old farts? You need to think forward. But if you find a way to connect your past to your future, and I know that sounds a bit hokey, but then you have something that is really a difference-maker. What was the differentiating point in the past, in their time, and how and why is that relevant to today? If you find that connection, I think you have a winner.

Chapter 5 : HIStory: Past, Present and Future, Book I - Wikipedia

Predictive models of archaeological site location have great potential as tools for archaeologists working in cultural resource management, and the ability to model archaeological sensitivity has become increasingly practical with the development of GIS technology and the availability of digital.

He and the surveyors that followed laid out farm lots for settlers, town sites, canals and railways. Surveyors were largely responsible for the creation of settlement patterns to accommodate waves of immigration and aboriginal land claims. Thousands of United Empire Loyalists and other settlers migrated from the U. Governor-General Sir Frederick Haldimand created the first township system in and land was distributed to the immigrants by drawing lots. A treaty was negotiated in whereby the British Crown acquired title to what is now southwestern Ontario. The result of this treaty was that most of the Ontario peninsula was opened to British and Loyalist settlement. Surveyors mapped canals to link overland routes with major water bodies and set the alignment of railways to connect settlements and increase trade. As settlement progressed, surveyors laid out townships consisting of lots and concessions. Although the history of the surveying profession in Canada began with the voyages of Champlain, the history of the Association of Ontario Land Surveyors began in , much of which is documented in the book *Great Lengths* by Charles Wilkins in celebration of years. Ontario Land Surveyors continued the legacy of their predecessors in shaping the foundations of significant political and economic development in Ontario like railways, highways and pipelines; farms, towns and cities; and forms of communication and travel that connect the people of Ontario to one another and the world. Chipman is best known for advancing the design of sewage treatment plants to save lives commonly lost to cholera, scarlet fever, typhoid and smallpox. Elected president of the AOLS in , Chipman advocated improved education and apprenticeships for surveyors, and more rigorous examinations for licensing. Before the launch of the Ontario Association of Real Estate Boards OAREB in , many land surveyors were land developers and successful business owners of grist mills, saw mills and farms, as well as being vendors of surveyed lots. Many townships of Ontario carry the names of surveyors. OAREB was established with the vision to organize real estate activities provincewide and to bring higher standards to real estate transactions. Eight years later, the provincial government passed the Real Estate and Business Brokers Act , which marked the beginning of bringing standards, respect and public trust to an emerging profession of Realtors. The act required salespeople and brokers to obtain a licence. Revisions to previous legislation governing the profession included tougher consumer protection regulations. Among the many uses of the Ontario cadastre set by Ontario Land Surveyors are real estate transactions that are drafted and executed by a principal team of Realtors, lawyers and land surveyors. There is no doubt that OREA is raising the bar for its members to obtain and maintain a licence to engage in transactions, and this action is strengthening the relationship between the Realtor and Ontario Land Surveyor.

Chapter 6 : 1-Understanding Past and Future Land Use

Land use/land cover change is an important driver of global change and changes in carbon stocks. Estimating the changes in carbon stocks due to tropical deforestation has been difficult, mainly because of uncertainties in estimating deforestation rates and the biomass in the forest that have been cut.

Brett Hill, Mathew Devitt, and Marina Sergeyeva Map showing the locations of the archaeological sites and survey projects used in the model. Predictive models of archaeological site location have great potential as tools for archaeologists working in cultural resource management, and the ability to model archaeological sensitivity has become increasingly practical with the development of GIS technology and the availability of digital environmental data. It comprises an area of approximately 3, square kilometers km² of Basin and Range province topography with elevations ranging from to 2, meters m above sea level. Except in the mountains, where evergreen woodland exists, the Sonoran and Chihuahuan desert environment dominates. Annual precipitation ranges from millimeters mm in the low desert to mm at higher elevations. Culturally the area has been the location of human habitation since the early stages of New World occupation up to 13, years ago. It is also the location of early agricultural sites and a setting for the introduction of domesticates to the region as much as 4, years ago. During the last centuries before European contact, the area was on the border between the Hohokam and Trincheras culture areas, and when the first European explorers arrived, the area was occupied by native Piman groups, whose descendents still live here. Overall, there is good evidence that some parts of the area were occupied fairly consistently for several thousand years, and many areas of occupation in earlier times are still important in contemporary land use. Most themes also emphasize various aspects of life along the river oases that are so prominent in this desert environment and provide the unifying principle for NHA. Demonstrating the archaeological aspects of this relationship between land use and the Santa Cruz River system was a key focus of the analysis. The larger goal in obtaining NHA designation was the development of heritage and nature tourism in the area. To most effectively manage this development and its impacts, it is necessary to illustrate where cultural resources are concentrated, their relationship to other resources, and how they will be affected by increased tourism activity. GIS and Statistics The statistical technique used for this predictive model was the logistic regression technique, described by K. Logistic regression is suitable for use with binary-dependent variables and a range of independent types including categorical variables common in environmental studies. These sites were chosen because they were likely to represent the broadest range of activities relevant to the interpretive themes and were most representative of past land-use and cultural resources that need protection. A nonsite was defined as any area where survey work did not reveal the presence of archaeological resources. Nonsite areas were converted to point locations to create a dataset with attribute association comparable to site locations. This process resulted in the identification of nonsite locations distributed broadly across Santa Cruz County. Obtaining and developing useful environmental data can be the most time-consuming and costly aspect of a predictive modeling project. Project constraints required the use of available data that was typically collected for quite different purposes and recorded at a scale that might not be appropriate for modeling some aspects of prehistoric land use. Consequently, it was necessary to derive meaningful attributes from this data while still discriminating statistically useful variation. Looking at Water Availability One especially important consideration in site location is difficult to address with standard hydrographic data. This is the availability of water. In the deserts of the Southwest, this was an important consideration for prehistoric settlers. It is difficult to identify this concern with current data in a way that reflects actual availability. Hydrographic data available from government sources typically does not adequately indicate subtle variations in water availability in the desert nor does this data address differences between current and past conditions. Simple distinctions between perennial and ephemeral streams, or methods of identifying stream order, do little to indicate the actual quantity and timing of water availability that are critical to human uses. Furthermore, surface water availability has changed greatly over time, particularly in the last century, because modern uses have affected flow characteristics and the water table. For example, in the present analysis, only two small segments of the

many streams in the area were identified as perennial; the rest were considered ephemeral. However, a more extensive perennial flow in the larger streams of this region has been historically well documented. Such a small difference in distance to ephemeral water sources hardly reflects its importance in this desert region and would provide little utility in discriminating among likely settlement locations. In the absence of an expensive paleoenvironmental study of past fluvial conditions, hydrological modeling using the ArcGIS Spatial Analyst extension and the Arc Hydro data model offered the best way to understand the relative availability of water to prehistoric settlers. Hydrological modeling characterizes the direction and accumulation of flow based on terrain. The size of watershed is one of the most important factors affecting the amount of water that flows in a given drainage. Based on the slope and aspect of each pixel in relation to its neighbors in the digital elevation model DEM, it is possible to calculate the total area that flows into each location, or its flow accumulation. This is a quantity most usefully described as a neighborhood statistic, as sites were typically situated near, rather than in, locations of high accumulation. A neighborhood sum was used to indicate the total area of watershed contributing to hydrologic flow within 1 km of a site location. This measure characterizes the amount of flow available in close proximity to a settlement and reflects variable availability as the distance from sites to drainages increases. The calculation of the neighborhood statistic resulted in a mean flow accumulation in the vicinity of sites that is more than times greater than the mean flow accumulation for nonsite vicinities and appears far more indicative of the variable availability of water and its relative importance in this environment. Choosing the Most Appropriate Model Attributes of environmental variables were assigned to the collection of sites and nonsites by location to produce a table for statistical analysis. An important problem in multivariate statistical models is how to determine which variables will provide the best model. Some discussion in the archaeological literature suggests using stepwise procedures, adding or removing variables based on a predetermined significance value. This procedure has been criticized, however, and the Bayesian Information Criteria BIC approximation Raftery offered a useful alternative for distinguishing the best set of variables for creating an efficient predictive model. For this project, BIC approximation indicated that a set of variables including flow accumulation, elevation, distance to springs, soils, and vegetation provided the best model. Further tests of this model against models suggested by stepwise procedures indicate superior performance of the BIC model. Results and Discussion The resulting predictive model provided mean probability estimates of. Reclassifying the probability map, so values above. Moreover, it is in stronger agreement with other models of natural resources, such as biodiversity, that are also an important part of the NHA. Despite the present need for a single model, it is essential to consider modeling as an ongoing, iterative process. The current project is only a feasibility study and will be followed by continued efforts as the NHA designation advances. Ultimately, more detailed management plans may require more elaborate modeling efforts and the consideration of new variables as necessary to clarify understanding of particular problems and relationships. Also, understanding the archaeology of this region will certainly improve as more research is conducted in coming years. As development expands greatly in the area, it will change the articulation of past and present interests. The present model cannot be considered a final word on archaeological sensitivity in Santa Cruz County. Rather, these efforts and the lessons learned will, it is hoped, serve as a productive foundation for continued work. It is encouraging that this initial project has offered a useful model and numerous valuable insights into the modeling process. For a more detailed description of this project, visit www.acknowledgments

The authors thank William H. Doelle for the support necessary to conduct this research and pursue the establishment of the Santa Cruz Valley National Heritage Area. Neuzil, and Linda J. Pierce for their thoughtful comments on this research. About the Authors J. Brett Hill holds a doctorate in anthropology from Arizona State University. He is a preservation archaeologist at the Center for Desert Archaeology in Tucson, Arizona, and a visiting assistant professor of anthropology at Hendrix College in Conway, Arizona. His interests are in GIS, human ecology, and land use in desert environments. He can be contacted at bhill@cdarc. His interests are in ceramic analyses and the late prehistory of the southwestern United States and northwestern Mexico.

Q&A: The past and future of Jaguar Land Rover. Jaguar revealed its aluminum-intensive, all-new XF sport luxury sedan at the New York show last week.

Problems playing these files? The majority of the new songs were written by Jackson. Kelly, pertain to isolation. Sheldon" from the chorus is sung, it resembles "Thomas Sneddon". In "This Time Around", Jackson asserts himself as having been "falsely accused". Jackson used Biggie again in on his album Invincible on the song "Unbreakable"; this made him the only rapper to appear on multiple Jackson LPs. HIStory in the Mix in Some speculate, the inspiration behind the song likely came from an artist called Gottfried Helnwein. Little Susie was based on a true story, written about a girl called Susie Condry who was murdered in Michael wrote and composed the song for her, dedicating it to her. Susie was abused and had a struggling life with no one loving her, no matter what she did. The full story can be found online. One of them, "Beautiful Victim", inspired the song. The song Helnwein is considered quite provocative as he paints about the human condition depicting wounded children, among others. Helnwein later painted a portrait of Michael. The song in fact is about the pain of prejudice and hate and is a way to draw attention to social and political problems. I am the voice of the accused and the attacked. I am the voice of everyone. I am the skinhead, I am the Jew, I am the black man, I am the white man. I am not the one who was attacking. It is about the injustices to young people and how the system can wrongfully accuse them. I am angry and outraged that I could be so misinterpreted. I could never be a racist. I love all races. They acknowledged that Jackson meant well and suggested that he write an explanation in the album booklet. All the while there is a vaguely political appeal in there The problematic aspect is that it does not entail a real intervention in that poverty. One analyst for SoundScan expressed the opinion that the press were out of touch with the public when it came to Jackson; the public liked him, while the press did not. Due to lack of radio airplay, "Smile" and "D. The average concert attendance was 54, and the tour lasted 82 tour dates. Jackson did not perform any concerts in the United States, besides two concerts in January in Hawaii. During the performance Jackson was dangled from the edge of a crane. Several singles were released from HIStory. The single had the best ever debut at number five - where it peaked, on the Billboard Hot The song was well received by critics. In the United States, the song peaked at number ninety one on the Billboard Hot Release and reception[edit].

Chapter 8 : A struggling country's past and future shaped by Alcoa and its aluminum | Pittsburgh Post-Gaz

Israel This week's skirmishes between the IDF and ISIS terrorists on the Israeli-Syrian border once again brings the issue of Israel's land to the forefront.

Now the Alcoa Corp. The Afobaka Dam, Suriname, South America Alcoa, the aluminum company founded in Pittsburgh in that eventually spanned six continents, set up shop here in when it found bauxite beneath the jungle floor. Cutthroat conditions in the global aluminum market compelled a shutdown in November Because we got a lot of funds from them, and we benefited " our education system, everything " one or the other way. Even as production slowed, Alcoa touched Surinamese life at many levels, supporting everything from schools for special needs students to homes for seniors with dementia. He happened to be from Les Baux, in France, and recognized the ore named for his hometown. At that point the market for aluminum foil was only 5 years old, and the metal was just emerging as the key component in lightweight aircraft. In , the company, the local minister-president and the Dutch governor agreed on a plan to power an ore-to-aluminum industrial complex and signed the year Brokopondo Agreement, named for the town just north of the proposed dam site. From through , Alcoa built the Afobaka Dam, and in Paranam a refinery to turn bauxite into alumina, and a smelter to convert that to aluminum ingots. About 10 million cubic yards of sand, rock, clay and concrete went into building the Afobaka hydroelectric dam, about 70 miles south of Paramaribo. Backed by a square-mile and foot-deep reservoir, the dam was designed to generate megawatts of electricity, although it now operates at about two-thirds of that capacity. Many of the workers were unionized. Their families got free education and health care. Their country got power " at a price. The sky at dusk is cut by the orange glow of the shuttered refinery at the Paranam Operations of Suralco, a subsidiary of Alcoa. Because it no longer needed electricity to fuel the now-closed smelter, Alcoa initially wanted to use the power to generate steam needed at its Paranam refinery. Halfuid, and Alcoa agreed to provide it. However, that meant Alcoa had to purchase oil to generate steam for its refinery. Financially, they were getting it from Paranam. Simons, the speaker of the National Assembly. Just how much the government is now paying Alcoa is a matter of dispute. He declined to say how much it costs Alcoa to generate a kilowatt hour. Rusland, though, put the price at 8 or 9 cents per kilowatt hour vs. Georga Burger in the one room house in New Ganze, Suriname she was relocated to when her village was flooded to provide water for the Afobaka Dam. Burger left with her children as the water rose around her old house, leaving many of her belongings and animals. An Alcoa spokesman wrote in response to questions that the cost of generation "is much higher than this speculative estimate," and that the price charged the government is contractual and ensures "that the asset continues to operate reliably, efficiently and safely. He said whatever the price is, it is a significant multiple of what it costs Alcoa to produce the electricity.

Bauxite to aluminum

Step 1 - Mining The bauxite, a clay-like soil found near the equator that contains about percent aluminum oxide along with iron, other metals and sand, is mined from the surface. Excavators or loaders then load the bauxite onto haul trucks to be transported to the crusher.

Step 2 - Grinding Once the clay is washed off and sent through a grinder, the bauxite is sent to a refinery.

Step 3 - Mixing stage Bauxite is mixed with a heated solution of caustic soda and lime that separates the alumina from the rest of the materials.

Step 5 - Clarification The slurry is then pumped into a thickening tank to settle out remaining impurities. The remaining liquid is filtered and washed to recover alumina and caustic soda. The caustic soda is recycled.

Step 6 - Precipitation The filtered liquid is pumped into a series of precipitation tanks where seed crystals are added. As these seed crystals settle through the liquid, dissolved alumina attaches to them. The resulting alumina crystals are then sent to a smelter.

Step 8 - Production pot The smelter consists of a series of steel pots that are lined on the bottom with carbon. The pots are situated in a row, or pot line, to form a continuous electric circuit. Carbon rods inserted into the pots conduct electricity through the solution to the carbon-lined bottom. The current causes oxygen molecules bonded to the alumina to break away. Pure molten aluminum collects on the bottom of the pot.

Step 9 - Vacuum crucible The molten aluminum is siphoned off into large crucibles using a vacuum system.

Step 10 - Molten aluminum The crucibles, containing nearly 9, pounds of pure aluminum, are then transported to the casting house where the

aluminum is further processed and hardened into ingots, billets or slabs. It takes four pounds of bauxite to produce two pounds of alumina, which makes one pound of aluminum. A company ready to go home A broken boat sits by the shoreline of the Brokopondo Reservoir in Suriname. Alcoa agreed to clean up its mines and industrial sites to U. The company, a subsidiary of Alcoa, has promised to remediate the land. Until then, the government would continue to purchase electricity from Alcoa using the formula based on the price of oil. It guarantees that Suriname will pay more for electricity each year if the government accepts the nonbinding agreement. The assembly was roiled again in February, when members learned that the minister of natural resources had continued to negotiate under the memorandum anyway. That should be handed over to Suriname immediately. Sardjoe, who heads a presidential commission negotiating with Alcoa, said the country lacks leverage. Courtesy of the Heinz History Center archives Who owns the dam? North Carolina sued the aluminum producer in , more than a decade after Alcoa closed a smelter there. You closed up shop, so the dam is ours. Pat McCrory said at the time the lawsuit was filed. People play soccer as dusk falls on the village of Adjuma Kondre in Suriname. Strikes, power outages and floods have added to the tumult. This month in Paramaribo, thousands of people have repeatedly protested against the government and its failure to stop inflation. Now that it is no longer making things here, Alcoa is perceived as a privately owned utility that should be put out of business. If you are, consider subscribing. If you are a loyal subscriber, thank you for your support. Alcoa leaves town The sky at dusk is cut by the orange glow of the refinery at the Paranam Operations for Suralco, a subsidiary of Alcoa. Bauxite that Alcoa mined in Suriname and exported to the United States was refined and smelted into aluminum, then forged into propeller blades, engine parts and other components of weapons that the Western Allies used to defeat Germany and Japan in World War II. More than 75 percent of the bauxite used by U. The now defunct Paranam Operations for Suralco, a subsidiary of Alcoa. But today, the same kind of economic trauma that distressed Pittsburgh when steel collapsed is playing out in Suriname. The global aluminum maker announced in January that it will permanently idle its Paranam refinery, where bauxite ore mined nearby was refined into alumina, the white powder from which aluminum is made. The refinery has not operated since late Bauxite reserves convenient to the refinery have been exhausted, something that Alcoa has been predicting would happen for more than 20 years. Suralco and government officials have been studying how to tap more abundant but lower quality reserves in western Suriname for years, but they never figured out a cost-effective way to transport the ore about miles to the Paranam refinery, which Alcoa said is not equipped to process the lower quality ore. Alcoa owns a controlling 60 percent stake in the venture, which is why its executives are leading negotiations with Suriname. Alcoa said energy and operating costs made the Paranam facility the highest-cost refinery in its system and that developing new sources of bauxite for the refinery is not justifiable based on current market conditions. The mercilessly competitive aluminum business has also been a factor, especially predatory competitors heavily subsidized by the Chinese government who have driven down the price of alumina. The fact that the aluminum market has shifted to Asia and the Middle East has added even more pressure. Could the refinery have been saved? Ramdin said he had developed a plan to ensure there was enough bauxite to justify keeping the refinery open. But he also said Alcoa should have done more to preserve an industry that played such a significant role in U. Its success provided thousands of employees with well paying jobs with ample benefits, in Pittsburgh and abroad. But like its corporate peers, Alcoa eventually faced a slower growing U. So it established outposts in exotic locales such as Suriname, Brazil, Jamaica, Australia, Iceland and, most recently, Saudi Arabia, to capitalize on burgeoning demand for the lightweight metal for the aerospace, automotive and other industries. Gradually, those enticements played a more significant role in decisions on where Alcoa and its competitors invested. Their villages were replaced by a foot-deep reservoir for a 1. Electricity generated by the dam powered an alumina refinery and aluminum smelter that Suralco built nearby at Paranam, and it electrified Paramaribo. The Brokopondo Agreement was supposed to last until , but the bauxite concessions Suriname awarded to Suralco as part of the agreement ran out long before then. There were other issues. Alcoa closed the smelter in , largely because of environmental concerns and its small size. Without a home market for its refined alumina, the Paranam refinery turned to export markets. Aluminum producers in Asia or the Middle East still need bauxite, but the cost of shipping the ore from the Western Hemisphere makes it less

competitive, said John Mothersole, an aluminum industry analyst with IHS Markit, a global economics consulting firm. Because of the cost of bauxite and the cost of energy. She said dwindling supplies of low-cost bauxite are also a problem. Alcoa retiree Russell Yester remembers being told to investigate how to get distant bauxite back to the Paranam refinery when he was stationed in Suriname from to Yester, who lives in McCandless. Alcoa also said it would examine whether to build another hydroelectric dam and smelter adjacent to the bauxite. But the Suriname government did not award concessions to mine the western reserves. Suriname economist Viren Ajodhia said it will be the fifth study of the western reserves. Everybody already knows the quantity and quality of the bauxite they hold, he said. He said technology and market conditions have changed since the last study.

Chapter 9 : Jaguar's past, Present and Future Models Will Be Electrified - AutosCommunity

The land use prediction will show an increase in the water yield in the future and increased surface runoff, but there is a decrease in ET due to changed landuse in the future. The surface runoff and water yield of is the lowest (mm and mm respectively), which increases gradually and highest increase is predicted in the.