DosGetNews()

Those(*?*?*?*!) Meta-Characters!

by Therese Stowell

Have you ever typed "del *a.*" and had your entire directory deleted? If so, you'll be happy to hear that this will be fixed in OS/2 v1.2. With the addition of file systems that support non 8.3 filenames, the existing meta character semantics will have to change.

A meta character is a character that can match any character(s). OS/2 supports two meta characters: '*' and '?'. In *nix, '*' matches 0 or more characters and '?' matches 1 character. In OS/2, '*' is expanded into '?'s to fill out the name (8 characters) or extension (3 characters)

```
*a.*    ->      ????????.???
a*.*b   ->      a???????.???
a*b     ->      a???????
```

A '?' matches 1 character, except if the character is '.' or the terminating null, when it matches 0 characters. This allows "????????.???" to match "abc.de". Matching a directory entry with the resulting expression is very fast. This method won't work with long names because one doesn't know how long the name will be and can't determine the number of '?'s to translate a '*' into. For example:

```
*a.*    ->      a.????
                ?a.???
                ??a.??
                ???a.?
                ????a.
                a.?????
```

and so on. The number of permutations is prohibi

tive. The solution is to retain the '*' in its original form and write a matching routine that processes '*'s properly. We couldn't maintain exact *nix semantics because "????????.???" had to match all files in a FAT fs directory to get FCBs to work. Also, OS/2 doesn't allow meta characters in the path, only in the final component: "a:\b*\foo.*" is illegal and "a:\bar\foo.*" is legal. After much hair pulling, these semantics were adopted:

> '*' matches 0 or more characters and will not cross '\' or NUL

> '?' matches 1 character, unless the character is a '.' or NUL, when it matches 0 characters.

So, "*a." will match only the files with an 'a' immediately preceding the '.'.

Meta characters are also used when creating a new filename during a copy or rename: "copy *.txt *.bak". The creation of the new filename is called meta editing. In the above command, "*.txt" is the source string and "*.bak" is the editing string. The new name is called the destination string.

The existing OS/2 semantics are poorly defined and suffer the same problems as the meta matching rules. After a much larger amount of hair pulling, the following guidelines were decided upon:

> There is no correlation between meta characters in the source and editing string. Source names are retrieved using FindFirst/Next and the editing string is then applied.

> Meta characters in the editing string

have the following semantics:

> '*' copies characters until it finds a source character that matches the characters following it in the target.

> '?' copies one character, unless what it would copy is a '.' or terminating null, in which case it copies 0 characters.

Thus, "ren f* b?a*a" has the following effects:

foo	->	boaa
foobar	->	boaba
foobar.3	->	boaba
foobara.baz	->	boaba

and "ren f* *c.?y*" results in:

foo	->	fooc.y
foobar	->	foobarc.y
foobar.3	->	foobarc.3y
foobara.baz	->	foobarac.byz
foocar	->	fooc.y

The meta editing processing is available as an API, DosEditName. It takes a source name without meta characters and an edit string with or without meta characters and stores the destination string in the user's buffer.

So, the next time you accidentally delete your directory or rename your files to the wrong thing, think of 1.2 and smile.

Disclaimer: the content of this product is subject to change.

SYSTEMS MANAGERS:

WHO'S WHO

For those of you who sometimes wonder where Microsoft found some of our fearless leaders, this is a special article about the SYSTEMS managers. This first time, I interviewed Dan Hinesly. Dan is the Manager of OS/2 Testing. He has worked here since January of this year.
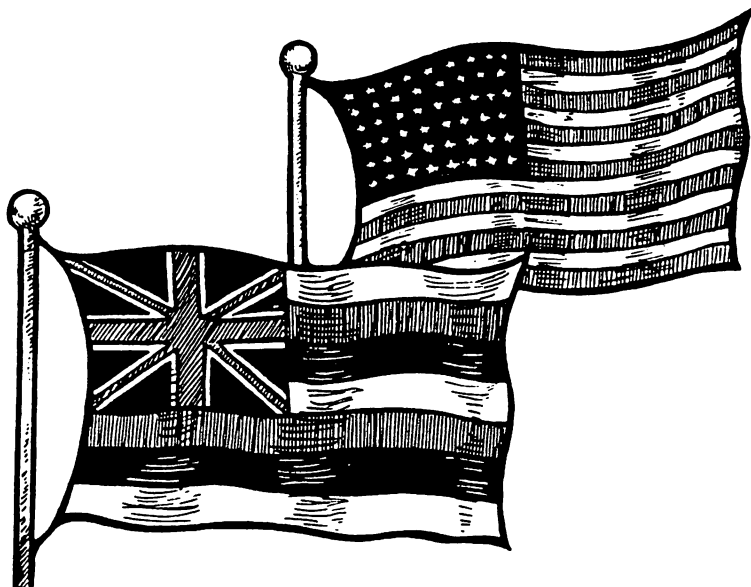
Dan Hinesly's wonderfully soft accent is the result of growing up in Memphis Tennessee. His undergraduate degree is in physics and math from Memphis State University. He did graduate work at Carnegie Mellon at Pittsburgh in psychology (focused on artificial intellegience). He realized after this that he was much more interested in computers than in academics.

He went to work for Federal Express. There, he moved from Applications to Technical Support to Management. At this time, he got his Executive MBA. He then spent about one year at EconoCom, a computer leasing company, as a commodity broker for used mainframes. This gave him the opportunity to make million dollar deals. But it was too much sales, and not enough technical challenge for him.

American Express, Fort Lauderdale, was the next step in his career path. He was the Director of Technical Support and ran the whole data center. This data center consisted of IBM mainframes and 160 people. But it was too bureaucratic, and he did not like not knowing most of the people working under him. He felt that it was too much like running a big factory and not technicologically satisfying.

All of his jobs until this time involved mainframes. He played with PCs at home. He saw an ad in a magazine for Microsoft employees and so here he is. Dan likes getting to know the 25-30 people who work for him. The enthusiasm he finds here did not exist at his previous jobs. He finds PCs (and PM) very challenging.

GOVERNMENT AND ECONOMY

GOVERNMENT

The only difference between the government of the State of Hawaii and other states is that it's "streamlined," and in theory more efficient. There are only two levels of government: the state and the county. With no town or city governments to deal with, the added bureaucracy is eliminated. Hawaii, in anticipation of becoming a state, drafted a constitution in 1950 and was ready to go when statehood came. Politics and government are taken seriously in the "Aloha State," which consistently turns in the best national voting record per capita. For example, in the first state elections 173,000 of 180,000 registered voters voted—a whopping 94 percent of the electorate. In the election to ratify statehood, there was hardly a ballot that went uncast, with 95 percent of the voters opting for statehood. The bill carried every island of Hawaii except for Niihau where, coincidentally, the majority of people (total population 250 or so) are of relatively pure Hawaiian blood. The U.S. Congress passed the "Hawaii State Bill" on March 12, 1959, and on August 21, 1959, President Eisenhower proclaimed Hawaii the 50th State. The present governor is George Ariyoshi, first Japanese governor in the United States. Mr. Ariyoshi has held this post since 1974.
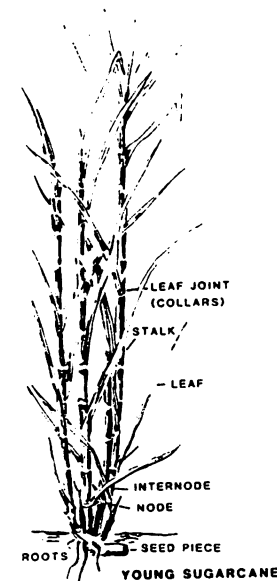
Maui County

The boundaries of Maui County are a bit odd-ball, but historically oddball. Maui County encompasses Maui Island, as well as Lanai, Molokai and the uninhabited island of Kahoolawe. The apparent geographical oddity is an arc on East Maui, from Makawao past Hana and along the south coast almost to Kihei, which is a "shared" political area, aligned with the Kohala District of the Big Island since Polynesian times. These two districts were joined with each other, so it's just a traditional carry-over. The real strangeness occurs in Maui's 5th Senatorial District and its counterpart, the 10th Representative District. These two political areas include West Maui and the islands of Lanai and Molokai. West Maui, with Kaanapali, Lahaina and Kapalua, is one of the most developed and financially sound areas in all of Hawaii. It's a favorite area with tourists, and is the darling of developers. On the other hand, Lanai has a tiny population that is totally dependent on a one-company "pineapple economy." Molokai has the largest per capita concentration of native Hawaiians, a "busted economy" with a tremendous share of its population on welfare, and a grass-roots movement determined to preserve the historical integrity of the island and the dignity of the people. You'd have to be a political magician to fairly represent all of the constituents in these widely differing districts.

Maui's Representatives
Hawaii's state legislature is comprised of 76 members, with the House of Representatives having 51 elected seats, and the State Senate 25. Members serve for 2- and 4-year terms respectively. All officials come from 76 separate electorates based on population. Maui is represented by three State Senators, all of whom are currently Democrats, and five State Representatives, four of whom are Democrats, with one Republican.
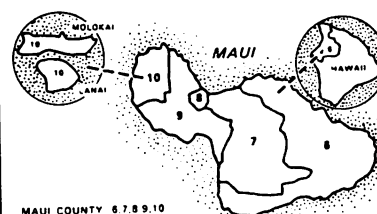
HOUSE DISTRICTS

MAUI COUNTY 6,7,8,9,10

SENATORIAL DISTRICTS

MAUI COUNTY 3,4,5

LEAF JOINT (COLLARS)
STALK
— LEAF
INTERNODE
NODE
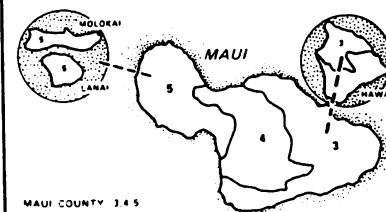ROOTS
SEED PIECE
YOUNG SUGARCANE

ECONOMY

Maui's economy is a mirror image of the state's economy: it's based on tourism, agriculture, and government expenditures. The primary growth is in tourism, with Maui being the second most frequently chosen Hawaiian destination after Oahu. Over 12,000 rooms are available on Maui in all categories, and they're filled 70 percent of the time. On average, Maui attracts close to a million tourists per year, and on any given day there are about 15,000 visitors enjoying the island. The building trades are still booming, and the majority of the rooms are in Kihei-Wailea, but the Kaanapali area is catching up fast.
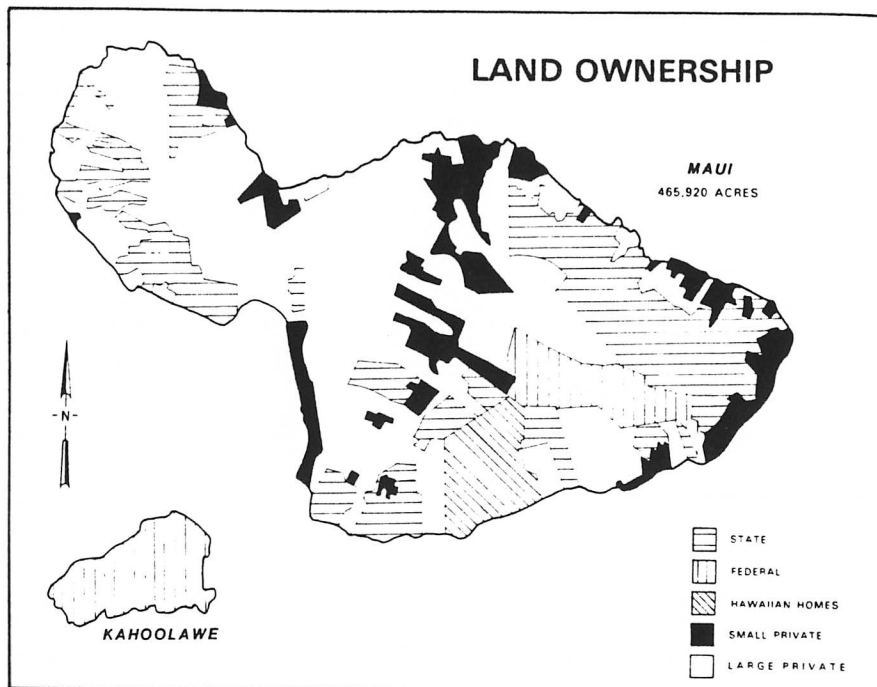
Agriculturally, Maui generates revenue through cattle, sugar, pineapples, *pakalolo*, and flowers. Cattle grazing occurs on the western and southern slopes of Haleakala, where 20,000 acres are owned by Ulupala Kua Ranch, and over 32,000 acres by the Haleakala Ranch. The upper slopes of Haleakala around Kula are a gardener's dream. Delicious onions, potatoes, and all

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LAND OWNERSHIP

MAUI
465,920 ACRES

- N -

KAHOOLAWE

☐ STATE
☐ FEDERAL
▨ HAWAIIAN HOMES
■ SMALL PRIVATE
☐ LARGE PRIVATE

collage of indulgent climate, invigorating waters, intoxicating scenery, and exotic people all wrapped up neatly in one area to both soothe and excite at the same time. It's in the best interest of Hawaii to preserve this resource. Most point to Waikiki as a prime example of development gone mad. Actually two prime examples of the best and the worst development can be found on Maui's south shore at Kihei and Wailea, which are less than 5 miles apart. In the late '60s Kihei experienced a development-inspired "feeding frenzy" that made the real sharks off its shore seem about as dangerous as Winnie the Pooh. Condos were slapped up as fast as cement can dry, their architecture reminiscent of a stack of shoeboxes. Coastline renowned for its beauty was overburdened, and the view was wiped out in the process. Anyone who had the bucks built, and now parts of Kihei look like a high-rise, low-income, federally funded housing project. You can bet that those who made a killing building here don't live here. Conversely, just down the road is Wailea, a model of what development could (and should) be. The architecture is tasteful, low rise, non-obtrusive and done with people and the preservation of the scenery in mind. It's obviously more exclusive, but access points to the beaches are open to everyone, and the view is still there for all to enjoy. It points the way for the development of the future.

Land ownership

Hawaii, landwise, is a small pie, and its slices are not at all well divided. Of 6,425 square miles of land, 98 percent make up the six main inhabited islands. (This figure does not include Niihau, which is privately owned by the Robinson family and inhabited by the last remaining pure-blooded Hawaiians, nor does it include Kahoolawe, the uninhabited Navy bombing target just off Maui's south shore.) Of the 4,045,511 acres that make up the inhabited islands 36 percent is owned by the state, 10 percent by the federal government and the remaining 54 percent is in private hands. But only 40 owners with 5,000 or more acres own 75 percent of all private lands. Moreover, only 10 private concerns own two-thirds of these lands. To be more specific, Castle and Cooke Inc. owns 99 percent of Lanai, while 40-60 percent of Maui, Oahu, Molokai, Kauai and Hawaii is owned by less than a dozen private parties. The largest private landowner is the Kamehameha Schools/Bishop Estate, which has recently lost a Supreme Court battle that allows the State of Hawaii to acquire privately owned land for "the public good." More than in any other state, Hawaii's landowners tend to lease land instead of selling it, and many private homes are on rented ground. Many feel that with land prices going up all the time, only the very rich land developers will be able to purchase, and the "people" of Hawaii will become even more land-poor.

sorts of garden vegetables are grown, but are secondary to large plots of gorgeous flowers, mainly carnations and the amazing protea. Sugar is still a very important Maui crop. The largest acreage is in the central isthmus area which is virtually all owned by the Alexander and Baldwin Company. There are also large sugar tracts along Kaanapali and the west coast that are owned by Amfac and Maui Land and Pineapple. Those lodging in Kaanapali will become vividly aware of the sugar fields when they're burned off just prior to harvesting. Pineapples are grown in the central east between Paia and Makawao where Alexander and Baldwin own most of the land, and on the far west coast north of Napili where Maui Land and Pineapple control most of the holdings. Renegade entrepreneurs grow patches of *pakalolo* wherever they can find a spot that has the right vibes and is away from the prying eyes of the authorities. Deep in the West Maui Mountains and along the Hana coast are favorite areas.

Government expenditures in Maui County are just over $35 million per year. A small military presence on Maui amounts to a tiny Army installation near Kahului, and the Navy owning the target island of Kahoolawe. With tourists finding Maui more and more desirable every year, and with agriculture firmly entrenched, Maui's economic future is bright.
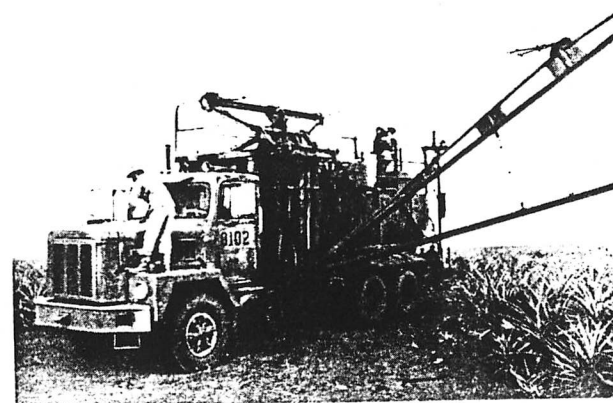
Tourism-related problems

Tourism is both boon and blight to Hawaii. It is the root cause of two problems: one environmental and the other socio-economic. The environmental impact is obvious, and is best described in the lament of songstress Joni Mitchell: "They took paradise and put up a parking lot." Simply, tourism can draw too many people. In the process, it stresses the very land and destroys the natural beauty that attracted people in the first place. Tourists come to Hawaii for what has been called its "ambient resource"—a balanced

This unwieldy looking vehicle gently plucks pineapples.

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