

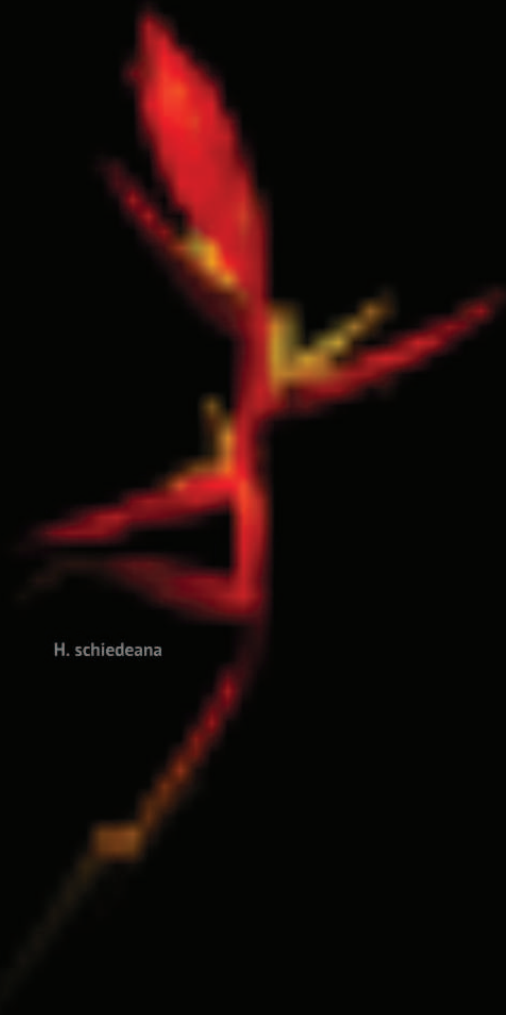
Collecting of the Future

How technology will affect collecting Zingiberales by the year 2100

Colton Collins

Plant Group Hawai'i, Inc.

H. schiedeana



Overview

- Background
- Future Technologies
 - Interactive Satellite Maps
 - Internet Contact Lenses
 - Handheld DNA Sequencer
- Plant Group Hawai'i, Inc.



Globba sp.
'Clown Button'

Background



H. lawrenciana
'Red Velvet'



Alpinia malaccensis
'Red Top'



H. pendaloides
'Perfect Darling'



Larsenianthus careyanus
'Cassi Collins'





H. lawrenciana
'Red Velvet'





Alpinia malaccensis
'Red Top'



Larsenianthus careyanus
'Cassi Collins'



na



H. pendaloides
'Perfect Darling'



เหนือสุดของแดนสยาม
THE NORTHERN MOST OF THAILAND

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ICHOL P



Technology of the Future

Interactive Satellite Maps



Store Data



Identify



Platforms

Present

- Google Earth

- Bing Maps

Future

- Real-time satellite imagery



Benefits

- Environmental monitoring

- Urban planning

- Disaster response

- Agriculture



Internet Contact Lenses



Handheld DNA Sequencer

Present



Future



- Identify using any plant part
- Identify chemical properties
- Pharmaceuticals

Interactive Satellite Maps



Store Data

Present



- Past collection sites
- Ecological Niche Models
- Protected areas, International boundaries, etc.

Future



Land Warrior

- Live GPS area tracking
- Buddy tracking
- Past collection areas

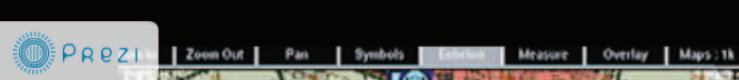
Store Data

Present



- Past collection sites
- Ecological Niche Models
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Future



Future



Land Warrior

- Live GPS area tracking
- Buddy tracking
- Past collection areas

Identify

Present



Conifers-Oregon forest management

Future



Kaempferia elegans 'Mae Ping'

Google & Apple + military grade cameras
= view of objects four inches wide

Present



Conifers-Oregon forest management

Future



Kaempferia elegans 'Mae Ping'

**Google & Apple + military grade cameras
= view of objects four inches wide**

Benefits

Safety-knowing where you are

Efficiency-search in unexplored areas

Discoveries- focused searches



Calathea crotilifera
'Cream Green'

Platforms

Present

- Tablets
- Smart phones



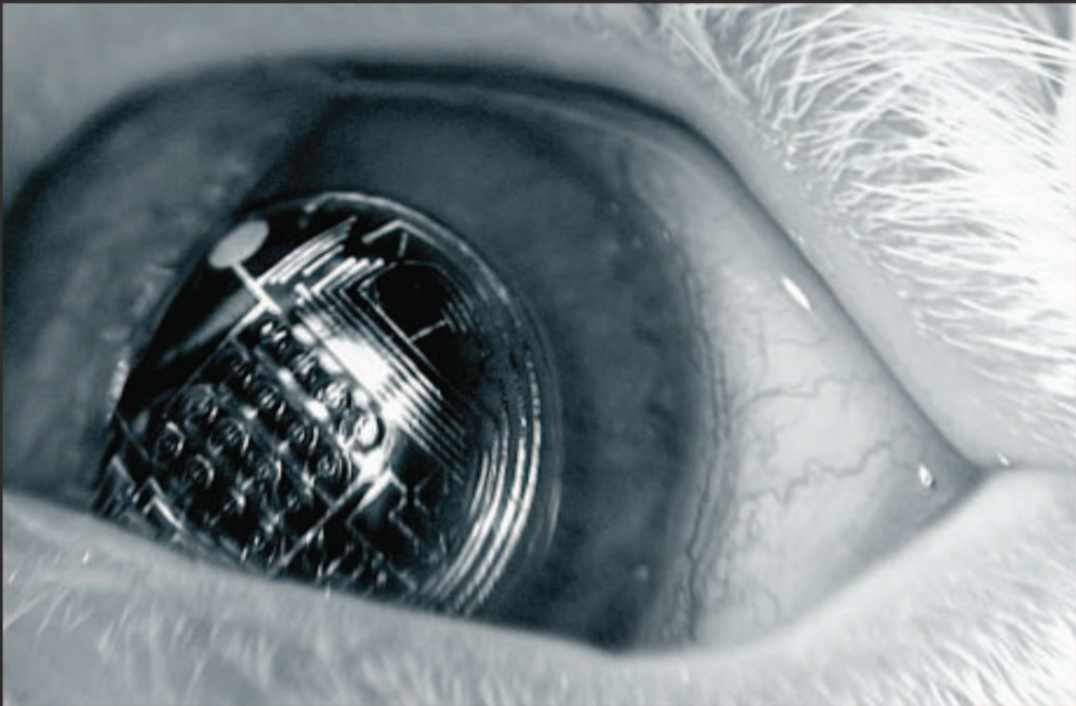
Future

- Near future - Samsung tablet
- internet contact lenses/glasses

Internet Contact Lenses



Internet Contacts/Glasses



- Washington State University
- 1.2 millimeters in diameter
- Semitransparent display

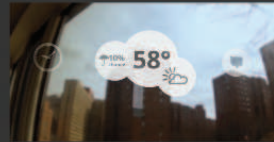
Stream/Share Information

Present



Project Glass

- Go online
- Stream data to your cloud

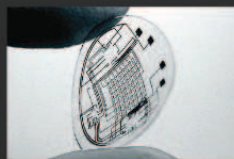


Weather Updates



- Share video/pictures
- Consult with colleagues
- Connect with loved ones

Future



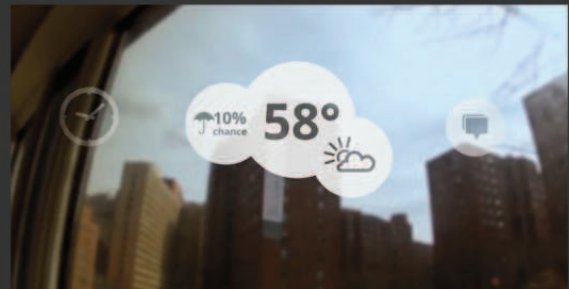
- Voice commands
- Hand motion controls
- Bionic eye

Present

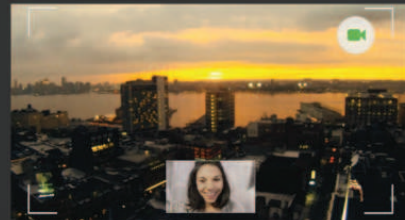


Project Glass

- Go online
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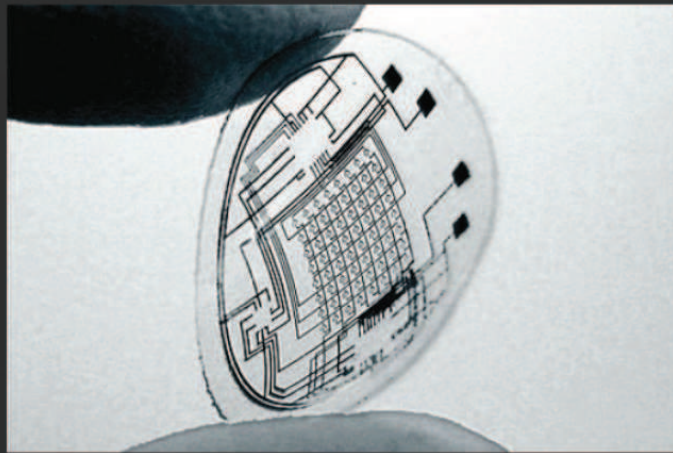


Weather Updates



- Share video/pictures
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Future



- **Voice commands**
- **Hand motion controls**
- **Bionic eye**

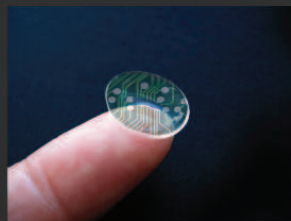
Universal Translator

Present

- Word Lens by Quest Visual
- Written real-time instant translation
- Spanish, English, French, more



Future



- subtitles
- audio
- imperfect

Universal Translator

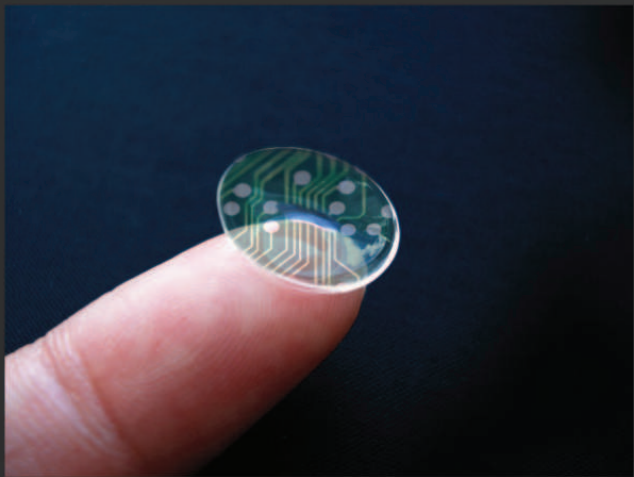
Present

- Word Lens by Quest Visual
- Written real-time instant translation
- Spanish, English, French, more



Future

Future



- subtitles
- audio
- imperfect

Plant Identification

Present



Leaf recognition software

- Photo of leaves
- List of possible species
- Additional plant info

Future



Kaempferia sp.
'Peacock King'



Curcuma lillicina
'Pink Cloud'

- 3D recognition
- Identify animals, insects, fungus
- Color recognition
- software + satellites
(x-ray vision)

Present



Leaf recognition software

- Photo of leaves
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Future



Kaempferia sp.
'Peacock King'

• Additional plant info



Curcuma lillicina
'Pink Cloud'

- 3D recognition
- Identify animals, insects, fungus
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- software + satellites
(x-ray vision)

Benefits

Safety

- interactive satellite technology
- effective communication
- identify poisonous insects, snakes, etc.
- keep track of blood sugar levels, etc.

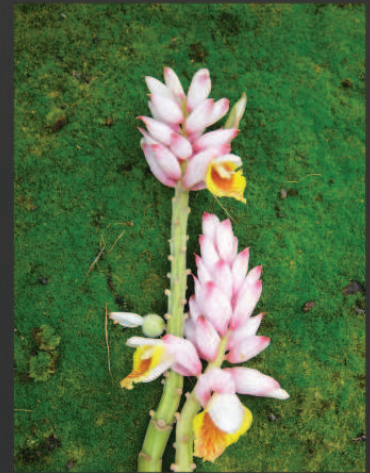


Efficiency

- Less time identifying known species
- Less communication errors

Increased Discovery Rates

- Identify what is not recognized by the software
- Amateur to Professionals



Alpinia sp. 'Mega Shell'

Handheld DNA Sequencer

Present



Future



- Identify using any plant part
- Identify chemical properties
- Pharmaceuticals

Present



MinION by Oxford Nanopore



Future



- Identify using any plant part
- Identify chemical properties
- Pharmaceuticals

Recap



Plant Group Hawai'i, Inc.

Mission

"To collect, cultivate, and conserve plants from around the world and to inspire others to do the same."

-Plant Group Hawai'i, Inc.



H. chartacea
'Sexy Scarlet'

Website



www.plantgrouphawaii.com

- User friendly
- New Services
- Se habla Español
- Online payments by card
- Plant Group Siam Mariposa

Facebook



<https://www.facebook.com/PlantGroupHawaii/>

- inspirational
- educational
- fun

Mission

"To collect, cultivate, and conserve plants from around the world and to inspire others to do the same."

-Plant Group Hawai'i, Inc.



H. chartacea
'Sexy Scarlet'

Website

Contact for Pricing
Email: info@plantgrouphawaii.com
Tel/Fax: 1.808.586.7943
(The Hahaione Office)

Plant Group Hawai'i, Inc.
Home | About | News | Contact | Orders

Rhizomes & Cool Flowers

Heliconias
all
Arista
Petaloni
Scheffera Lili
Singer
Alma
Suruma
Kings
Della
Hedera
Complere
Engle
Scheffera Lili

Colubines & Cacti
Dellie
Della
Scheffera Lili



Collect.
Collect exotic plants from the tropics. We offer an extensive array of high quality plants material for the enthusiast and the most discriminating collectors for botanical gardens, research projects and horticultural industry development.

Cultivate.
Cultivate your personal collection in your backyard greenhouse or on your farm. Whether you are an amateur or a professional, contact us with your cultivation questions and our specialists will assist you.

Conserve.
Every year, over 21,000 square miles of tropical forest are being deforested. By cultivating tropical species on your property you can do your part to contribute to global conservation efforts. Enjoy the beauty of nature while protecting it.

We specialize in:



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- User friendly

- New Services

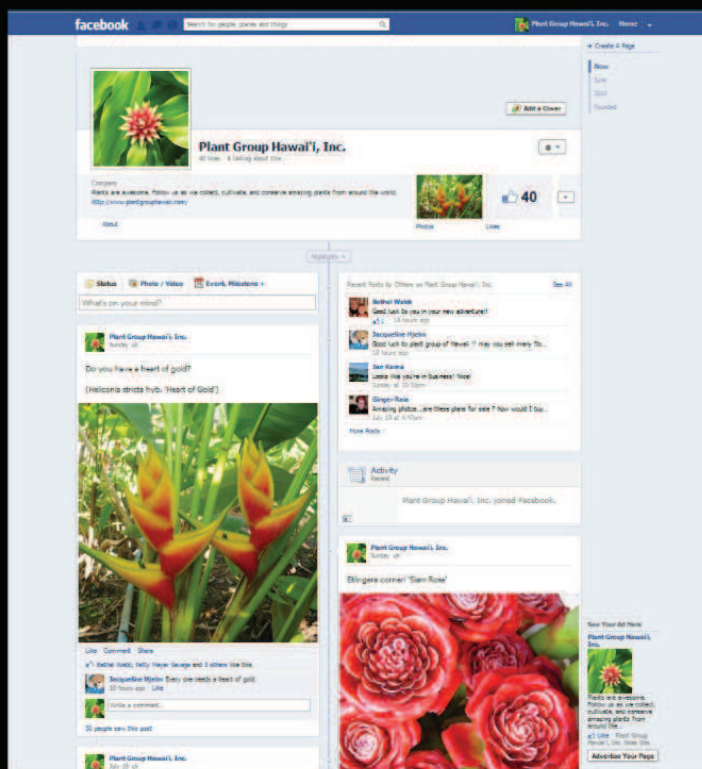
-Se habla Español

-Online payments by card

- Plant Group Siam Mariposa

www.plantgrouphawaii.com

Facebook



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- educational
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Questions?



Zingiber spectabilis