Intégration de statistiques en temps réel

Real time statistics on live stream

par

ZELLER QUENTIN

h e p i a

Haute école du paysage, d'ingénierie et d'architecture de Genève

Filière communications, multimédia et réseaux HAUTE ÉCOLE DU PAYSAGE, D'INGÉNIERIE ET D'ARCHITECTURE DE GENÈVE

Rapport concernant le travail de semestre du Bachelor en INGÉNIERIE DES TECHNOLOGIES DE L'INFORMATION dans la spécialisation COMMUNICATIONS, MULTIMÉDIA ET RÉSEAUX.

FÉVRIER 2018

Directeurs du travail : El Maliki Tewfiq, Revuelta Andres

Abstract

H ere goes the abstract

$Dedication\ and\ acknowledgements$

ere goes the dedication.

Author's declaration

	declare that the work in this dissertation was carried out in accordance with the
re	equirements of the University's Regulations and Code of Practice for Research
⊥ D	Degree Programmes and that it has not been submitted for any other academic
award	d. Except where indicated by specific reference in the text, the work is the
candid	date's own work. Work done in collaboration with, or with the assistance of,
others	s, is indicated as such. Any views expressed in the dissertation are those of the
author	r.

SIGNED:	DATE :

$Table\ of\ Contents$

			P	age
Li	ste d	s tableaux		ix
Ta	ıble d	es figures		хi
1	Intı	duction		1
	1.1	Section		1
		1.1.1 Subsection		1
2	нв	ΓV		5
	2.1	Fonctionnement général		6
	2.2	Environnement de développement		6
		2.2.1 Emulateurs		6
A	App	endix A		9
Bi	bliog	raphie		11

Liste des tableaux

TABLE

Table des figures

	FIGURE	Page
1.1	Hair-forming mutant cells	2
1.2	Developmental zones of an Arabidopsis root	3
2.1	HbbTV broadband vs broadcast	5
2.2	Hair-forming mutant cells	7
2.3	Developmental zones of an Arabidopsis root	8

1 Introduction

Begins a chapter. Example: When the beloved cellist (Christopher Walken - outstanding) of a world-renowned string quartet receives a life-changing diagnosis, the group's future suddenly hangs in the balance: suppressed emotions, competing egos and uncontrollable passions threaten to derail years of friendship and collaboration. Featuring a brilliant ensemble cast (including Philip Seymour Hoffman, Catherine Keener and Mark Ivanir as the three other quartet members), it is a fascinating look into the world of working musicians, and an elegant homage to chamber music and the cultural world of New York. The music, of course, is ravishing (the score is the work of regular David Lynch collaborator Angelo Badalamenti): A Late Quartet hits all the right notes.

1.1 Section

Begins a section.

1.1.1 Subsection

Begins a subsection.

Guides and tutorials Share LATEX

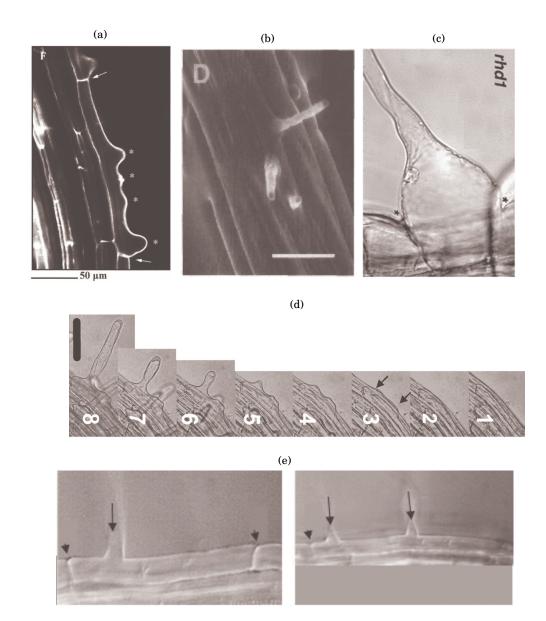


FIGURE 1.1. (a) A mutant RH cell. Asterisks show multiple sites of RH initiation in a single root hair cell (indicated by the arrows). Figure reproduced from [5]. (b) Hairforming cell with three RH initiation locations. The bar represents $50\mu m$. Figure reproduced from [3]. (c) Large bump in mutant rhd1. Figure reproduced from [?]. (d) Mutant overexpressing gene ROP2; from right-hand to left-hand, numbers indicate progressive snapshots at different times. RH initiation sites are indicated by the arrows. The bar represents $75\mu m$. Figure reproduced from [2]. (e) Mutants affected by auxin. On the left-hand side, RH site is farther away from the apical end (left arrow cap); on the right-hand side, multiple RH locations (arrows). Figure reproduced from [4].

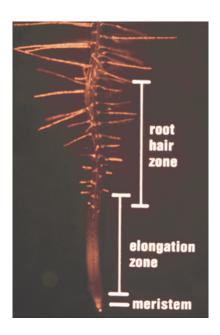


FIGURE 1.2. Developmental zones of an Arabidopsis root. Figure reproduced from [?].

2 HBBTV

ybrid Broadcast Broadband TV, plus connu sous l'acronyme HbbTV est un standard permettant le partage d'information et de services en complément a un flux multimédias destinés a l'utilisateur final.

Il fait partie des outils ou protocols TV OTT, acronyme signifiant télévision Over The Top ou services par contournement en français et qui définissent les contenus ne passant pas par le bouquet proposé par l'opérateur internet / télévision. C'est donc l'antithèse de la télévision linéaire, mode de consommation traditionnel. [1]

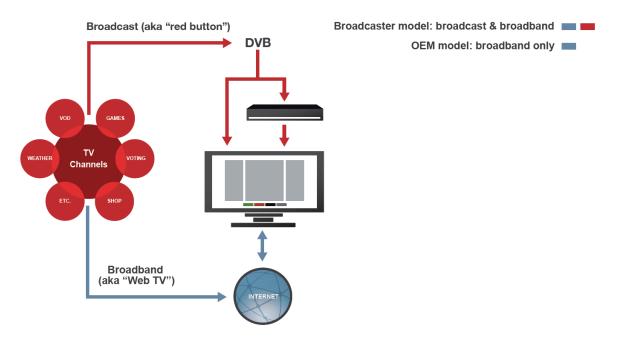


FIGURE 2.1 – HbbTV Broadband vs Broadcast

Guides and tutorials Share IATEX

2.1 Fonctionnement général

2.2 Environnement de développement

Begins a section.

2.2.1 Emulateurs

Begins a subsection.

Guides and tutorials Share LATEX

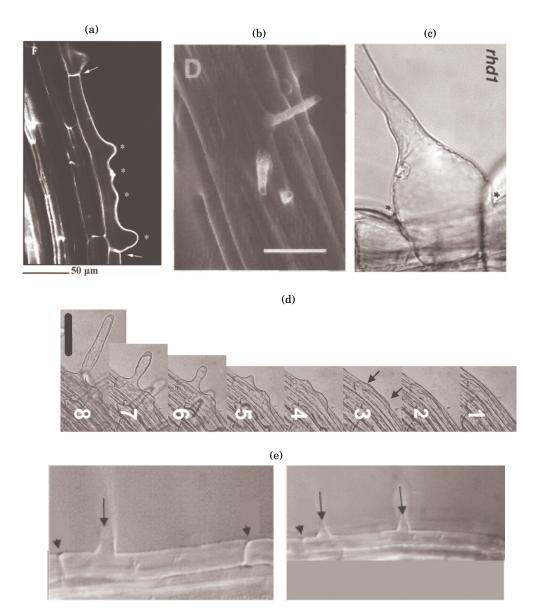


FIGURE 2.2. (a) A mutant RH cell. Asterisks show multiple sites of RH initiation in a single root hair cell (indicated by the arrows). Figure reproduced from [5]. (b) Hairforming cell with three RH initiation locations. The bar represents $50\mu m$. Figure reproduced from [3]. (c) Large bump in mutant rhd1. Figure reproduced from [?]. (d) Mutant overexpressing gene ROP2; from right-hand to left-hand, numbers indicate progressive snapshots at different times. RH initiation sites are indicated by the arrows. The bar represents $75\mu m$. Figure reproduced from [2]. (e) Mutants affected by auxin. On the left-hand side, RH site is farther away from the apical end (left arrow cap); on the right-hand side, multiple RH locations (arrows). Figure reproduced from [4].

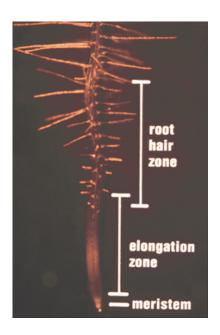


FIGURE 2.3. Developmental zones of an Arabidopsis root. Figure reproduced from [?].

$A \quad Appendix A$

egins an appendix

Bibliographie

- [1] WIKIPEDIA, Over-the-top media services, https://en.wikipedia.org/wiki/ Over-the-top_media_services, 28 January 2018, at 13:23.
- [2] M. Jones and N. Smirnoff, Nuclear dynamics during the simultaneous and sustained tip growth of multiple root hairs arising from a single root epidermal cell, J. of Exp. Bot., 57 (2006), pp. 4269–4275.
- [3] J. D. MASUCCI AND J. W. SCHIEFELBEIN, The rhd6 mutation of arabidopsis thaliana alters root-hair initiation trhough an auxin- and ethylene-associated process, Plant. Physiol., 106 (1994), pp. 1335–1346.
- [4] R. PAYNE AND C. GRIERSON, A theoretical model for rop localisation by auxin in arabidopsis root hair cells, PLoS ONE, 4 (2009), p. e8337. doi:10.1371/journal.pone.0008337.
- [5] S. RIGAS, G. DEBROSSES, K. HARALAMPIDIS, F. VICENTE-ANGULO, K. A. FELDMAN, A. GRABOV, L. DOLAN, AND P. HATZPOULOS, *Trh1 encondes a potassium transporter required for tip growth in arabidopsis root hairs*, The Plant Cell, 13 (2001), pp. 139–151.
- [6] HBBTV APPLICATION DAS ERSTE, Example of application with video content, http://hbbtv.daserste.de/index.php, Main application 30 January 2018.