

Advances in Communication Techniques in Europe

Thomas Bertrand



5ª Jornada Síndrome de RETT: de la investigación a la implementación de
nuevas herramientas de comunicación en el entorno Rett

What is AAC?

- **A**ugmentative and **A**lternative **C**ommunication

“AAC is a set of tools and strategies that an individual uses to solve everyday communicative challenges.

→ Speech, a shared glance, text, gestures, facial expressions, touch, sign language, symbols, pictures, speech-generating devices [...]”

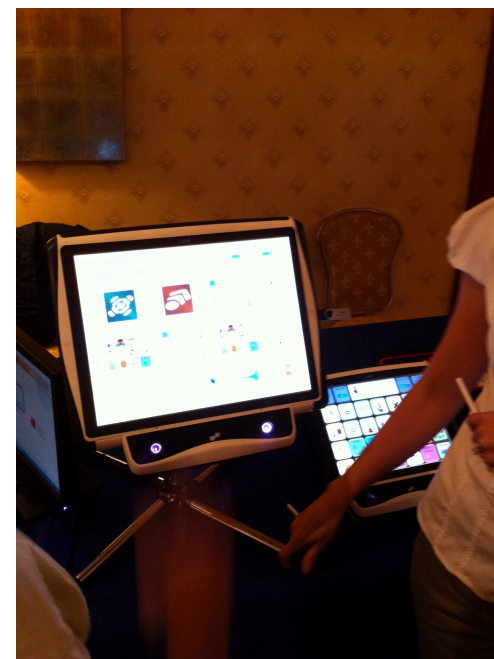
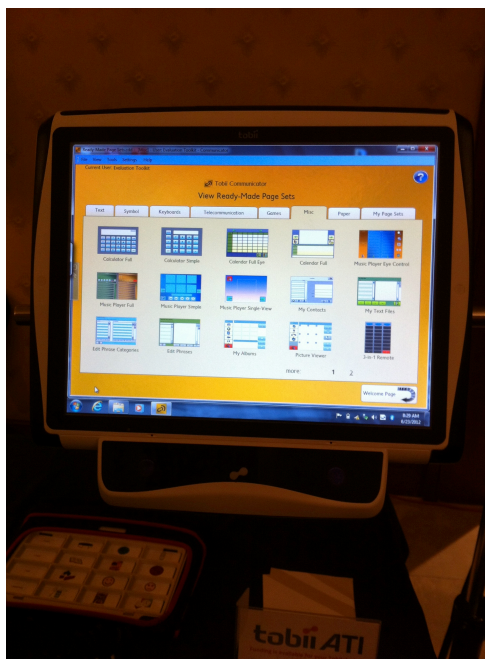


**International Society for Augmentative
and Alternative Communication**

www.isaac-online.org

AAC: a mix of Hi-Tech and Lo-Tech

- Today I will mainly talk about Hi-Tech tools, especially eye-tracking devices



Why the eye-tracking?



“They feel all the love given to them. They have a great sensitivity for love. I am sure of this.

There are many mysteries, and one of them is the girls’ eyes. I tell all the parents to look at their eyes. ***The eyes are talking to them.***

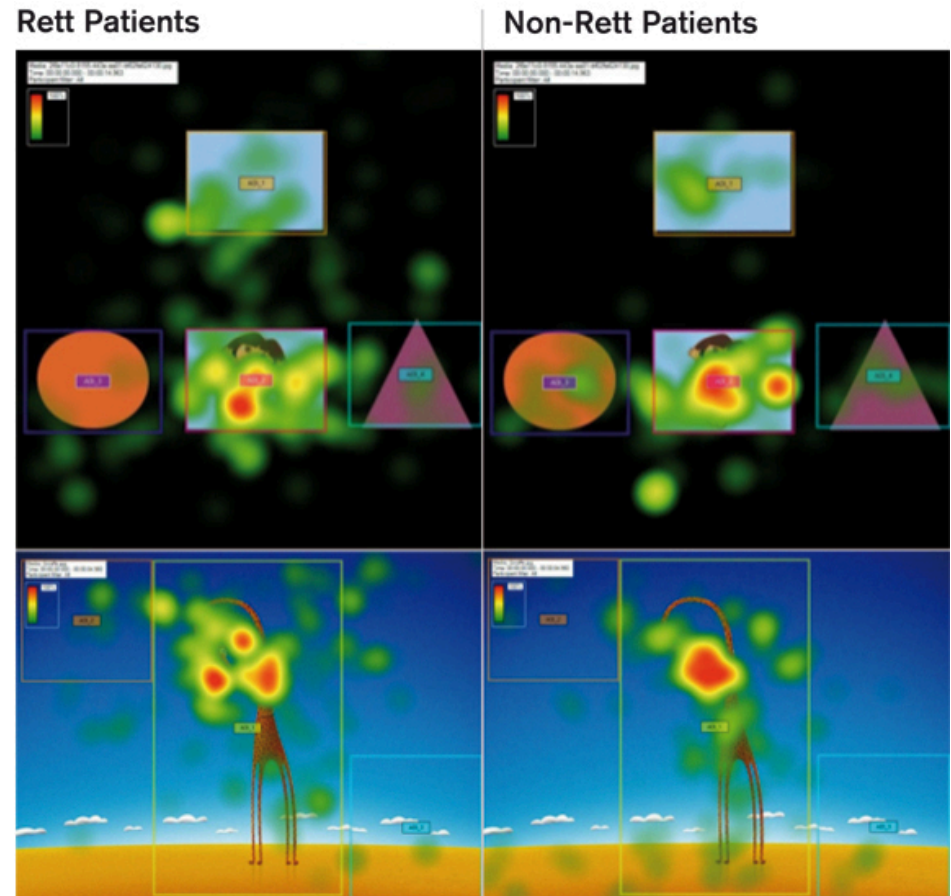
I am sure the girls understand everything!”

Prof. Andreas Rett

Study Rett-Syndrome at Center in Montefiore, NY 2012 (Djukic, A. *et al*)

Rett-Syndrome patients
appeared to demonstrate
similar fixation patterns
compared to non-Rett-patients

NO significant Differences

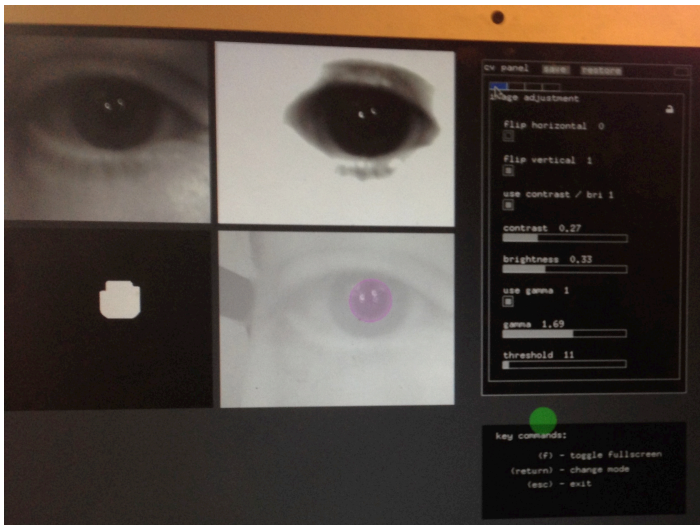


Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

EyeGaze Technology



- Two cameras built in
- Infrared-light shine a nearly imperceptible light on the eyes
- The camera "sees" the reflection of the light off the pupils
- An algorithm turns the information from the camera into "mouse" movement



Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

Tobii series



I-series

C-series



PCEyeGo for laptop

Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

Communication = PLAY

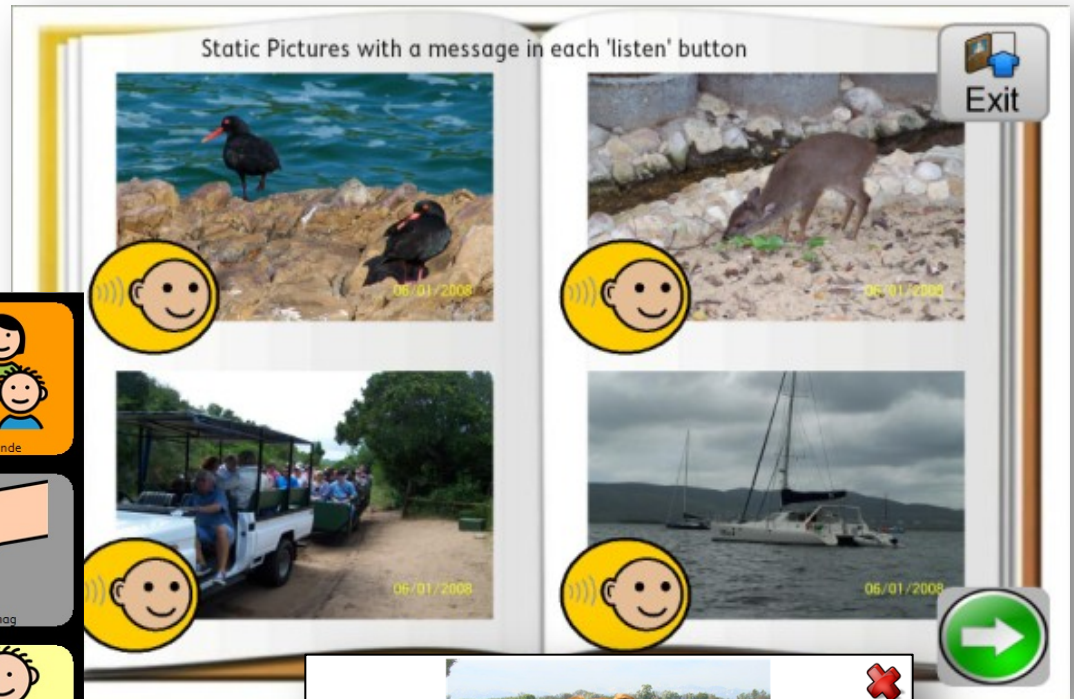
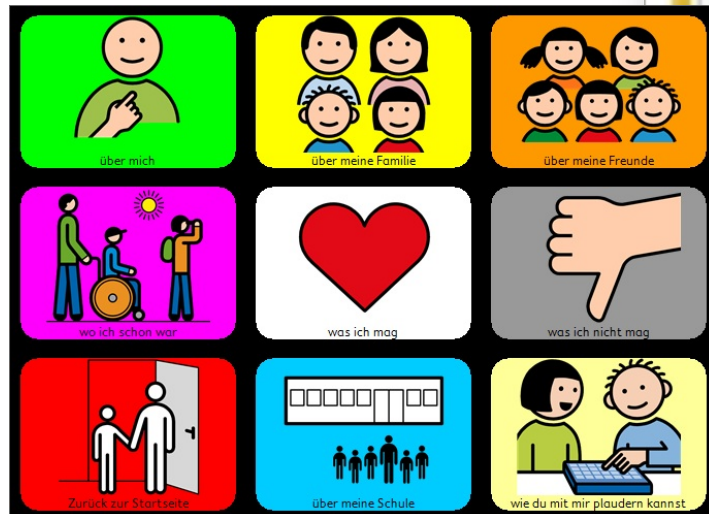
Use the device to PLAY
games & make music!



Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

Communication = TELL STORIES

Use the device to
show pictures and
tell stories about me,
and about anything



Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

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Communication = CONTROL

Use the device to
control IR-devices
(TV, Radio, DVD, ...)



Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

Eye-tracker: who has one?

- Most of the feedback comes from Germany/
Austria
- There are several countries which have funding systems and having devices paid by health insurances: Germany, Switzerland, Norway, Sweden, Denmark, England
 - In Germany about 100 families do have and use a Tobii Eyetracking system (C-Series or I-Series)

Ready or not?

Our Rett-Girls find their „Voice“
in Eye-Gaze Technology



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Romana Malzer
Isabellas Mum
AAC-Consultant

EyeGaze is an Option – not THE answer!



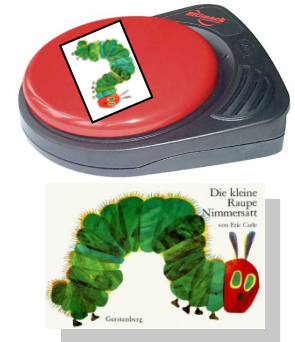
Songs on the
BigMack



Switch-adapted
toys



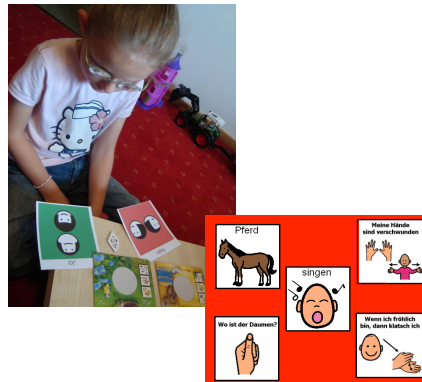
Switch-Games on PC



Reading with
BigMack/SbS



Choice of
photo-cards



Choosing of symbols



Integrate symbols
in everyday life



Daily routine with
photos / symbols



made books with
pics and symbols
„My summer,“ ...



Claim activity
with Step-by-Step



Daily calendar with
symbol-messages
for school<->home



We adapted
anything – really
anything!!



Social scripts on
the Step-by-step



Touch-device with
3x3 keyguards (2007)



HeadTracker (2010)
with Laptop and tobii
communicator



Tobii C12 with Cdote
(2011)

Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

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Lo-tech Methods

- symbols/pics/objects without voice output
- facial and body language
- Eye gaze
- Communication Boards

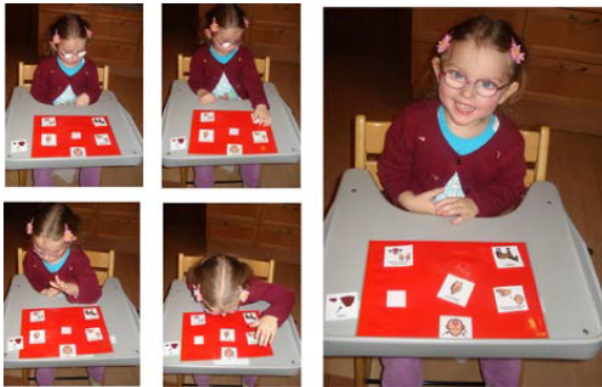


Abbildung 04: Talker-Simulation



Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

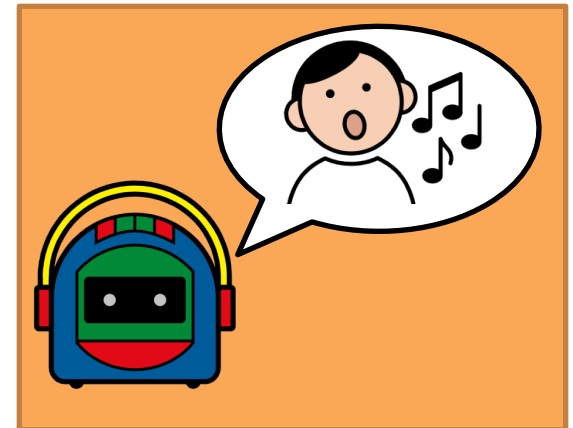
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Thank You!

Helpful Things



www.youtube.com/playlist?list=PL7a_iFZZjIRQjSu8XB14xS351ZnERErOQ

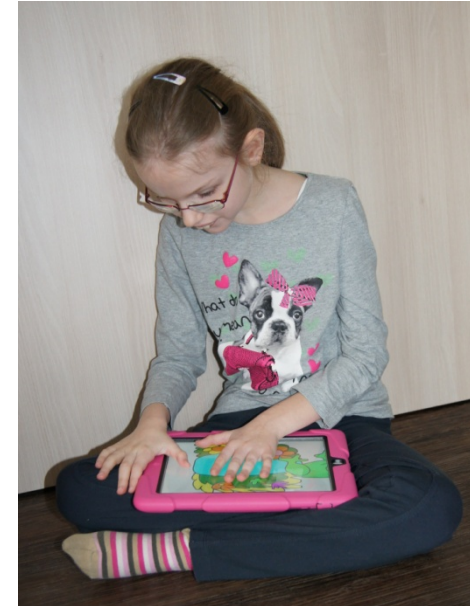
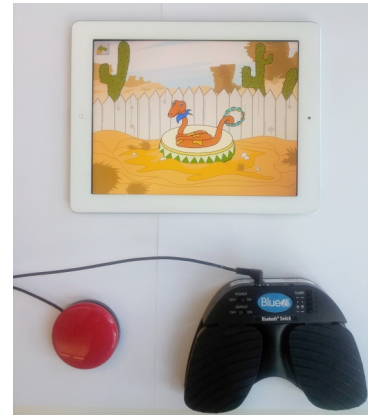


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iPad for Rett-Kids?

- **Cause & Effect Apps** (touch or switch)
- **Playing Apps**
 - TouchMe-Apps
- **Communication Apps**
 - GoTalkNow



Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

www.janefarrall.com/switch-accessible-apps-for-ipadiphone-non-aac/
www.youtube.com/playlist?list=PL7a_iFZZjIRQfGCmU3-PXIMV0BwC9B9jk

www.rareconnect.org/es/community/sindrome-de-rett/forum/topic/original-language/what-ipad-apps-for-our-daughters-rett

SwitchAccess for iPad



- List of switch-compatible Apps:

www.janefarrall.com/switch-accessible-apps-for-ipadiphone-non-aac/



- useful hardware:

- Applicator (Pretorian)
- NewBlue2



- Useful covers

- Griffin survivor
- BigGrips
- BestCool for iPad

Courtesy of Romana Malzer - <http://isabella-online.blogspot.fr>

Some videos about eye-tracking

Alyssa:

youtu.be/l-TMsyceef8?list=PL8B29602D5DCDDF7B

youtu.be/jGFsj1OSJ8A?list=PL8B29602D5DCDDF7B

youtu.be/9mSUacNLic0

Isabella counting with an step-by-Step:

youtu.be/lIUevFCqKUuw?list=PL553FB37A7EC28874

Isabella playing on the ipad:

youtu.be/FuboJRZdl1s?list=UUEmMp5xWTHflZSazCYNSK1w

Isabella looks a book with the special Software KlickTool Literacy using a switch (and a funny frog-speaker J):

youtu.be/_T5gOctuO_O?list=UUEmMp5xWTHflZSazCYNSK1w

Isabella talking about the candles burning (counting) – with german subtitles:

youtu.be/HGKM6QCWk7O?list=PL553FB37A7EC28874

My favorite Video of Isabella – she wants to know of her therapist as their baby in the belly (pregnant!). The therapist u. my, we understood later on, what she exactly wanted ... AAC users must be really persistent sometimes:

youtu.be/KqeVzXISpHI?list=PL553FB37A7EC28874

German Rett-Girl talking with tobii:

youtu.be/JuXKY7wmkXU

Really COOL Presentation of Hector Minto about tobii and Rett-Syndrome:

youtu.be/PZ3O5KcyjJw

Nice Video of Cammy Can (US) using her tobii – reading a book:

youtu.be/uGqIJgU5wJM

Video about Rett-Syndrome, but at minute 1.38 till 2.00 you can see, how the girl works with a PODD Book:

youtu.be/WHzqNdFI8gc

Video of Chrildrens Hospital in Los Angeles showing AAC-Possibilities for Rett-Girls:

youtu.be/i92yIG8GGC8

Videos of Margot playing with its TheEyeTribe eye-tracker and Look to Learn free demo:

youtu.be/zxldXs_U8V0

youtu.be/2EFrIBkdPt0

Near Field Communication (NFC) technologies



WSRC New Orleans (USA) - 2012

youtu.be/ZIt2bHEoPTM

