

A man wearing a brown fedora, a light blue denim jacket over a pink shirt, and a brown scarf is sitting on a ledge. He is looking down with a sad expression. The background is a blurred city street at dusk or night, with warm lights from buildings and cars creating a bokeh effect.

*“My dog
just died..”*

Alexithymia and Autism

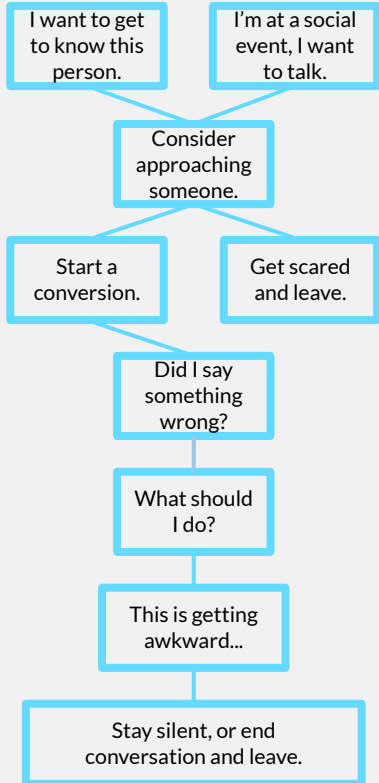


A photograph of two young men sitting at a desk with papers, overlaid with a large white number. The man on the left is wearing a grey hoodie and the man on the right is wearing a teal and white track jacket. They are both looking towards the camera. The background is slightly blurred, showing a red curtain and some foliage.

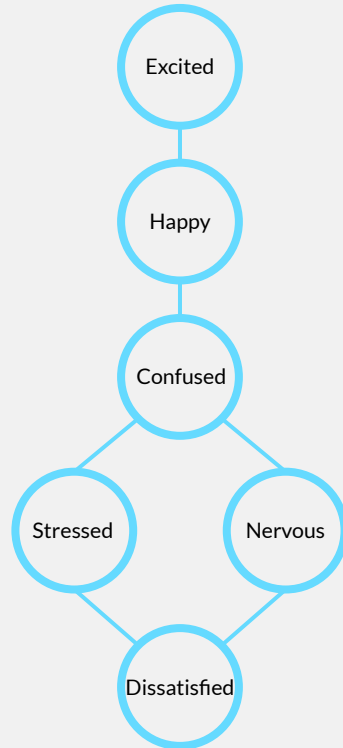
32 000 000

Understanding Someone With Alexithymia

What are they thinking?



How do they feel?



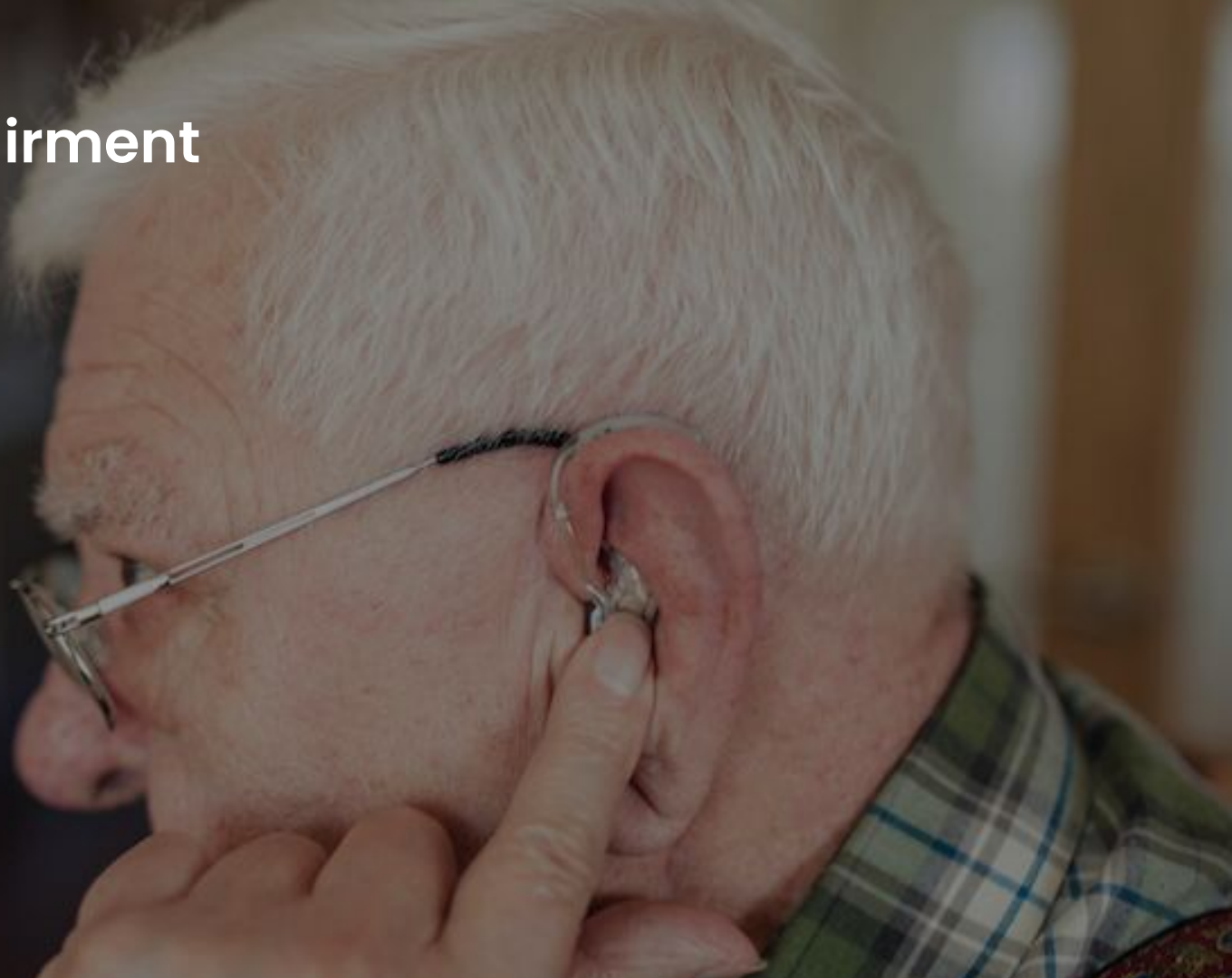
Where are the pain points?



Feeling Chart



Auditory Impairment



A close-up photograph of two hands clasped together in a prayer-like gesture, with fingers interlaced. The hands are positioned centrally against a dark, blurred background. The lighting is soft, highlighting the skin texture and the arrangement of the fingers.

446 0000 0000

Current Treatments



Therapy



Speech-to-Text





Inconvenient

A man with a beard and a gold armband is shown from the chest up, holding his head in both hands with a distressed expression. The background is a plain, light-colored wall.

Inconvenient

A large tortoise is shown from a side profile, moving slowly across a light-colored, textured surface. The tortoise has a dark, patterned shell and yellowish-orange markings on its head and legs.

Slow

A man with a beard and a gold armband is shown from the chest up, holding his head in both hands with a distressed expression. The background is a plain, light-colored wall.

Inconvenient

A large tortoise is shown from a side profile, moving slowly across a light-colored, sandy or dusty surface. The tortoise has a dark, patterned shell and yellowish-orange markings on its head and legs.

Slow

A large pile of various coins, including copper and silver ones, is shown on a dark surface. A thin tube or pipe is pouring more coins into the pile from above.

Expensive

Information-Delivering Smart Glasses

An innovative and impactful solution for
the emotionally challenged and the deaf.





(11) EP 3 296 797 A1

(12) EUROPEAN PATENT APPLICATION

- (43) Date of publication: 21.03.2018 Bulletin 2018/12 (51) Int Cl.: G02B 27/01 (2006.01) G02B 26/08 (2006.01) G02B 26/10 (2006.01) G02B 5/18 (2006.01) G03H 1/26 (2006.01) G03H 1/04 (2006.01)
- (21) Application number: 17198048.5
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- (30) Priority: 25.03.2013 PCT/IB2013/052347 18.11.2013 PCT/IB2013/060218 (74) Representative: r. Felix et al Maucher Jenkins 26 Caxton Street London SW1H 0QF
- (62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC: 14724151.7 / 2 979 128
- (71) Applicant: INTEL Corporation Santa Clara, CA 95054 (US)
- (72) Inventors: • TREMBLAY, Eric 1025 St. Sulpice (CH)
- (54) METHOD FOR DISPLAYING AN IMAGE PROJECTED FROM A HEAD-WORN DISPLAY MULTIPLE EXIT PUPILS

(57) Head-worn display comprising a light source emitting a plurality of light beams, two of which having different wavelengths, a scanning mirror (212) to scan the plurality of light beams in two distinct axes to form an image, a holographic optical element (201) to receive the plurality of scanned light beams from the scanning mirror

(212) and to redirect them to a plurality of spatially-separated exit pupils (212, 304) to project the image at the plurality of exit pupils (212, 304) to hold the light source, the scanning mirror (212) to scan the plurality of light beams in two distinct axes to form an image, a holographic optical element (201) in fixed position relative to the frame (1001) being adapted to receive the plurality of scanned light beams from the scanning mirror

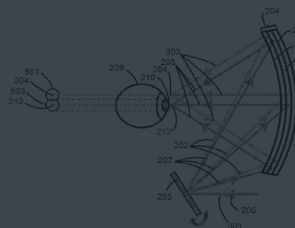


FIG. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 17 19 8048

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	JP 2009 282085 A (PANASONIC CORP) 3 December 2009 (2009-12-03) * paragraph [0066] - paragraph [0069]; figures 1,5 *	1-15	INV. G02B27/01 G02B26/08 G02B26/10
A	US 6 407 724 B2 (WALDERN JONATHAN DAVID [US] ET AL) 18 June 2002 (2002-06-18) * paragraphs [0129], [0191]; figure 4 * * figure 4 *	1-15	ADD. G02B5/18 G03H1/26 G03H1/04
A	US 2011/060551 A1 (SUGIYAMA KEIJI [JP] ET AL) 18 June 2010 (2010-03-11) * paragraph [0040] - paragraph [0041]; figure 4 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			G02B G02C G03H
The present search report has been drawn up for all claims			
Place or address of the applicant		Date of completion of the search	Examiner
The Hague		17 January 2018	Michel, Alain
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background D : non-written disclosure P : intermediate document			



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2000 Neuchâtel (CH)
• MOSER, Christophe
1007 Lausanne (CH)

(30) Priority: 25.03.2013 PCT/IB2013/052347

18.11.2013 PCT/IB2013/060218

(74) Representative: Rummler, Felix et al
Maucher Jenkins
26 Caxton Street
London SW1H 0RJ (GB)

(62) Document number(s) of the earlier application(s) in

accordance with Art. 76 EPC:

14724151.7 / 2.979.128

(71) Applicant: INTEL Corporation
Santa Clara, CA 95054 (US)

Remarks:

This application was filed on 24-10-2017 as a
divisional application to the application mentioned
under INID code 62.

(72) Inventors:

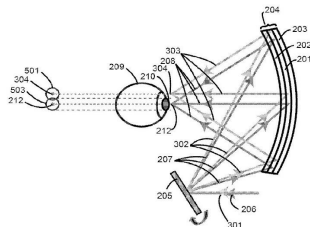
• TREMBLAY, Eric
1025 St. Sulpice (CH)(54) METHOD FOR DISPLAYING AN IMAGE PROJECTED FROM A HEAD-WORN DISPLAY WITH
MULTIPLE EXIT PUPILS(57) Head-worn display comprising a light source
emitting a plurality of light beams, two of which having
different wavelengths, a scanning mirror (212) to scan
the plurality of light beams in two distinct axes to form an
image, a holographic optical element (201) to receive the
plurality of scanned light beams from the scanning mirror(212) and to redirect them to a plurality of spatially-sep-
arated exit pupils (212, 304) to project the image at the
plurality of exit pupils, and a frame (1001) to hold the light
source, the scanning mirror (212), and the holographic
optical element (201) in fixed relation to one another, said
frame (1001) being adapted to be worn on a user's head.

FIG. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 17 19 8048

DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	JP 2009 282085 A (PANASONIC CORP) 3 December 2009 [2009-12-03] * paragraph [0066] - paragraph [0069]; figures 1,5 *	1-15	INV. G02B27/01 G02B26/08 G02B26/10
A	US 6 407 724 B2 (WALDERN JONATHAN DAVID [US] ET AL) 18 June 2002 (2002-06-18) * paragraphs [0129], [0191]; figure 4 *	1-15	ADD. G02B5/18 G03H1/26 G03H1/04
A	US 2010/060551 A1 (SUGIYAMA KEIJI [JP] ET AL) 11 March 2010 (2010-03-11) * the whole document *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			G02B G02C G03H
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		17 January 2018	Michet, Alain
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T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons S : member of the same patent family, corresponding document			

EPC FORM 1603 (03.02.2012) (P/4C/21)

Gathering Data

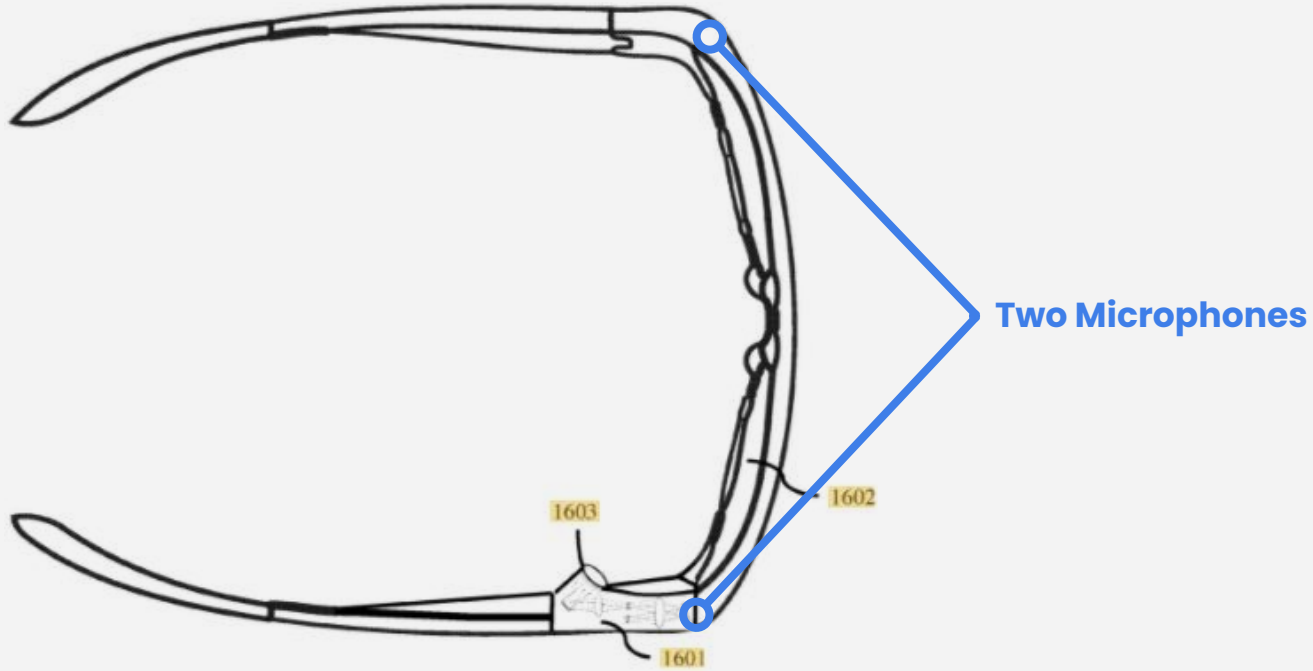


FIG. 16

Gathering Data

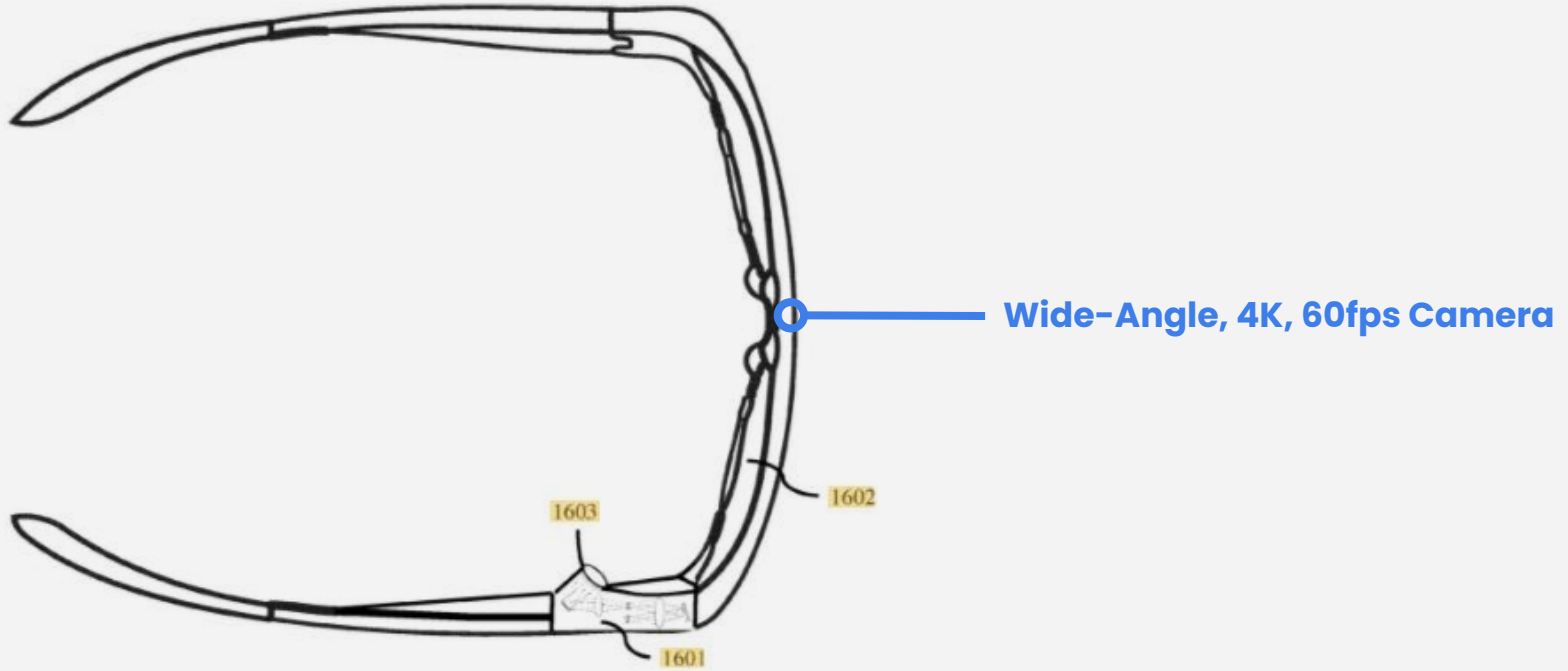
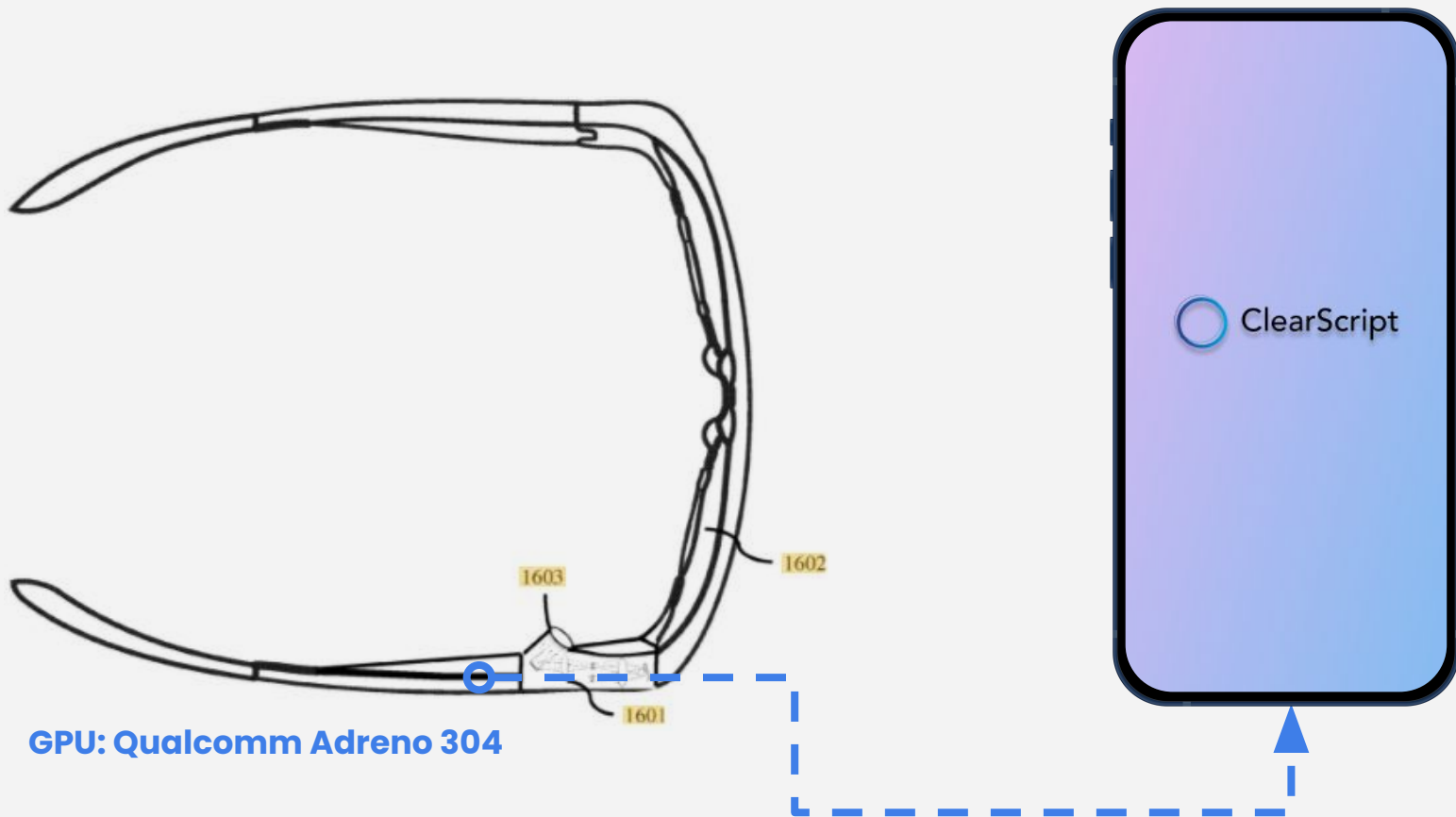


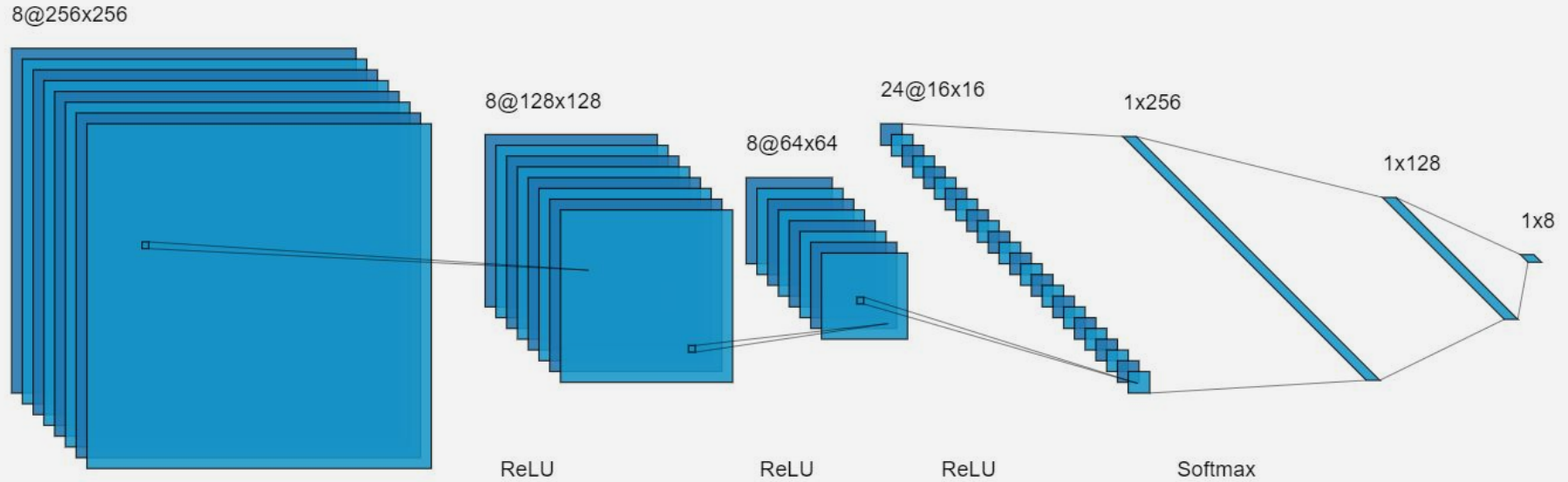
FIG. 16

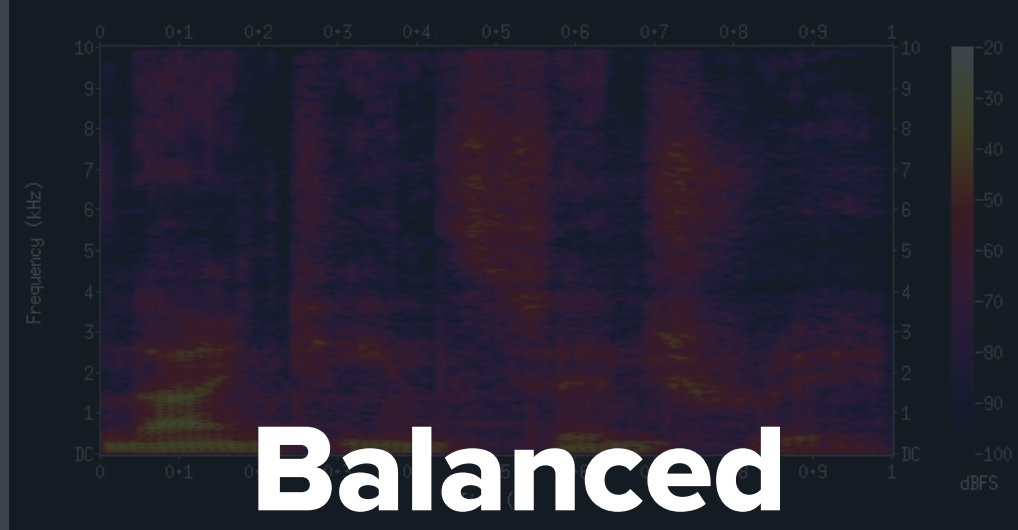
Sending Data





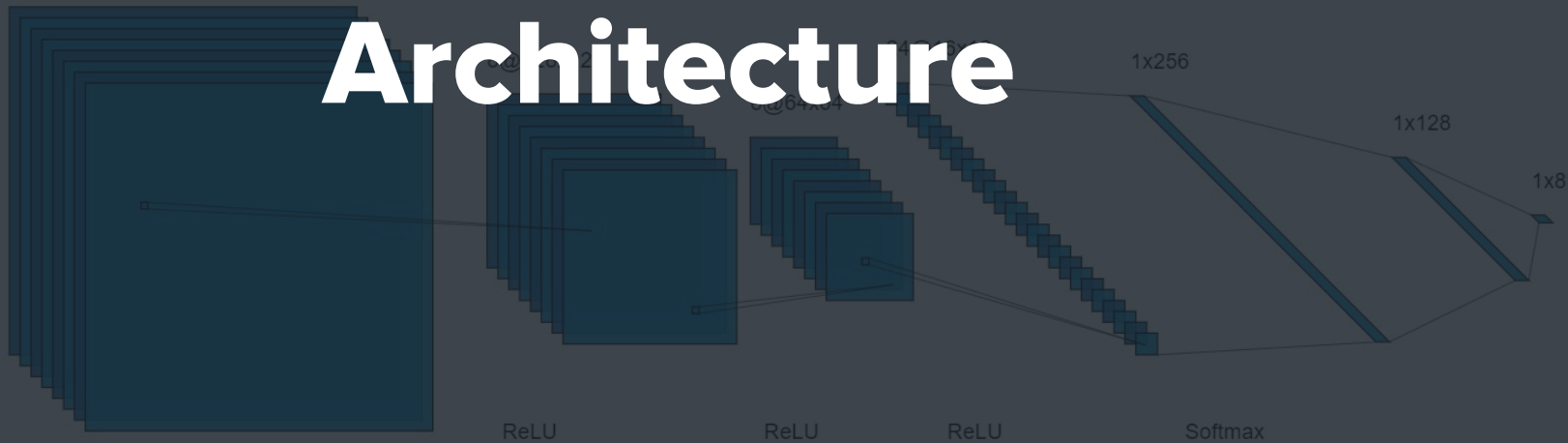
Speech Analysis





Balanced Architecture

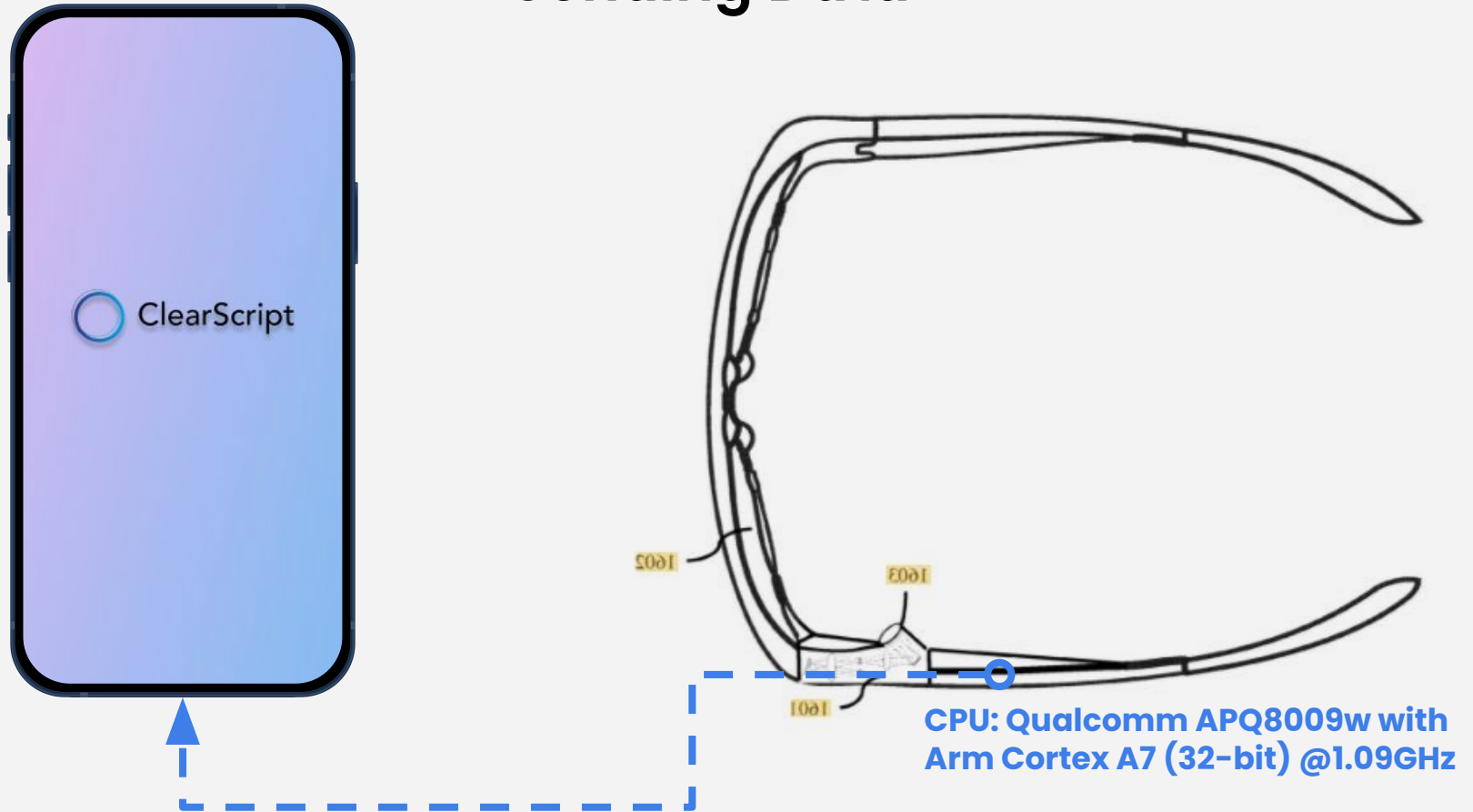
8@256x256



**100 Frames Per
Second**



Sending Data



Displaying Images

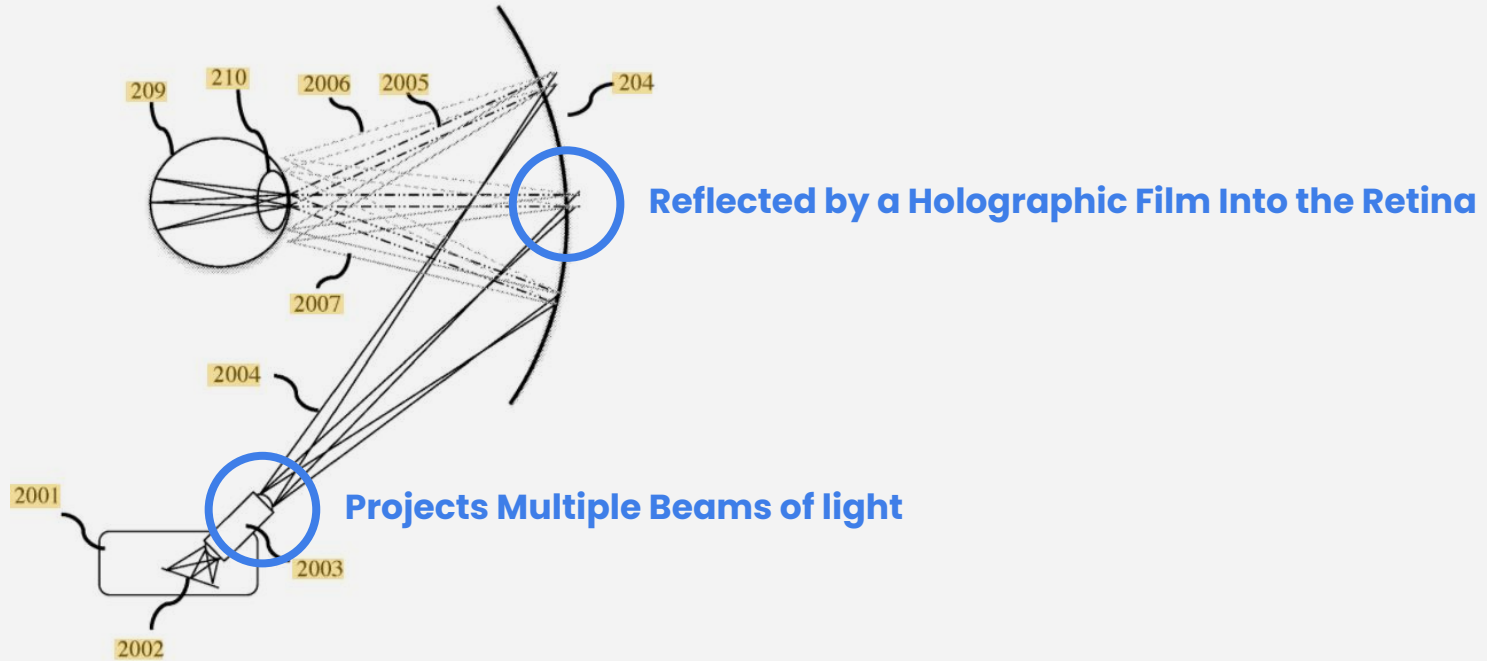
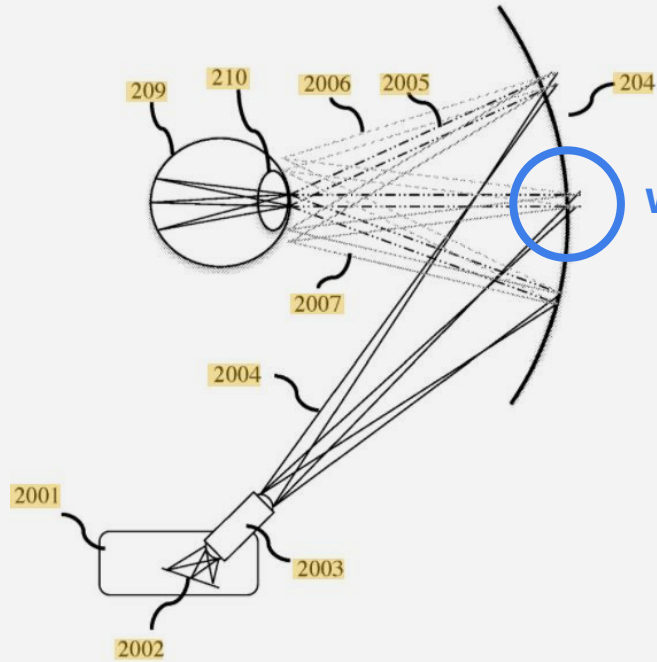


FIG. 20

Displaying Images



We Can Display Images Up to 300 x 300 pixels

FIG. 20

Display Mock-up



Emotion Only

Display Mock-up



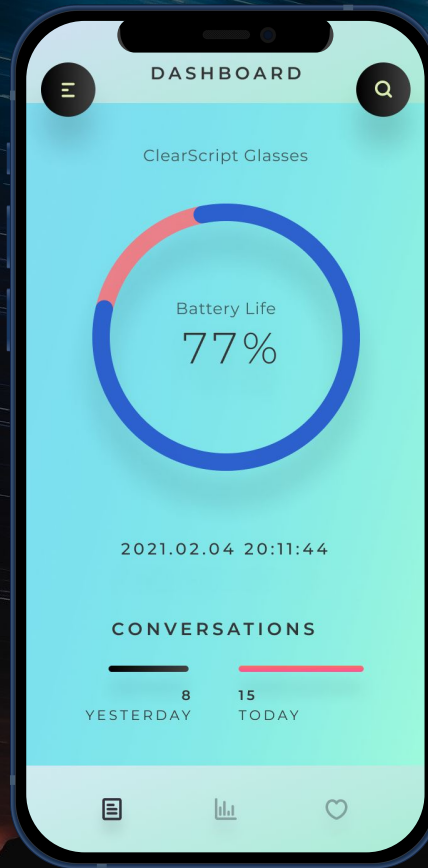
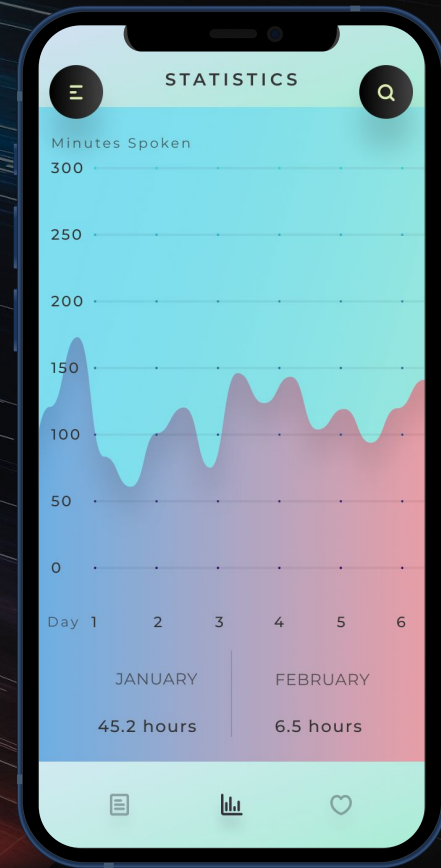
Multiple People

Display Mock-up



Speech-to-Text

App Mock-up



Low-cost



A hand is shown holding a stack of US dollar bills, with a flame emerging from the top of the stack. The background is dark, and the text is overlaid in white.

\$200 000 000 000
Every year



**“This technology could greatly improve
the quality of life of people with an ASD”**
***- Johanne Mainville, Psychologist and Consultant
Specialized in Serious Behaviour Disorders***



ClearScript